

ATARI ST REVIEW

WHAT'S NEW, WHAT TO BUY, WHAT TO PAY

WORTH £60!
CYBERPAINT/KID GP
ART & ARCADE PROGRAMS

CELEBRATION TIME!!

WIN!!
A LYNX!

THE END OF AN ERA
AND THE DAWN OF A
NEW AGE? WE LOOK
BACK ON A YEAR IN
THE LIFE OF ATARI...



LASERS FOR ALL!
WE TAKE THE LID OFF THE LATEST
THE HP LASERJET 4

WIN!!
A PRINTER

ISSN 0965-7789



ON DISK: CYBER PAINT ART & ANIMATION PACKAGE GAMES KID GP AND PLOP TERADESK FULLY WORKING REPLACEMENT DESKTOP CLIP ART
FILES ACCESSORIES; FINDER, RAMDISK AND MORE TWRKS BAK; BACK UP YOUR TIMEWORKS DISKS FROM ISSUE SEVEN AND MUCH, MUCH MORE
INSIDE: SCREEN ACCELERATORS RACED TOS 2.06 UPGRADE ORGANISERS PART TWO NEW YEAR GAME RELEASES AND TUTORIALS GALORE

Over 120,000 people have joined Special Reserve - the Games Club with no obligation to buy.

PRINTERS FOR ATARI ST

CANON BJ-10EX BUBBLE JET

64 NOZZLE, 80 COLUMN, 83LQ CPS 2LQ/1 DRAFT FONT, 1 YEAR WARRANTY. A SMALL, PORTABLE PRINTER, VERY QUIET IN OPERATION YET GIVING OUTSTANDING PRINT QUALITY. **FREE PRINTER LEAD** **FREE MEMBERSHIP**

219.99

CITIZEN 224

WITH COLOUR KIT, 24 PIN, 80 COLUMN, 192CPS/64LQ, 3LQ/1 DRAFT FONT, 2 YEAR WARRANTY. 24 PIN LETTER QUALITY PRINTER WITH EXCELLENT GRAPHICS CAPABILITY (360X360 DPI). **FREE PRINTER LEAD** **FREE MEMBERSHIP**

224.99

CITIZEN 240C

WITH COLOUR KIT, 24 PIN, 80 COLUMN, 240CPS/80LQ, 9LQ/1 DRAFT FONT, 2 YEAR WARRANTY. ADVANCED VERSION OF 24C WITH AUTOSAVE FEATURE AND LCD CONTROL PANEL. **FREE PRINTER LEAD** **FREE MEMBERSHIP**

279.99

CITIZEN SWIFT 200

WITH COLOUR KIT, 24 PIN, 80 COLUMN, 216CPS/72LQ, 6LQ/1 DRAFT FONT, AUTO SET FACILITY, INPUT DATA BUFFER, AUTO PAPER LOADING, ENVELOPE PRINTING, 2 YEAR WARRANTY. **FREE PRINTER LEAD** **FREE MEMBERSHIP**

234.99

CITIZEN SWIFT 9

WITH COLOUR KIT, 9 PIN, 80 COLUMN, 192CPS/48LQ, 2LQ/1 DRAFT FONT, 2 YEAR WARRANTY. A 9 PIN PRINTER WITH COLOUR FACILITY AND FULL PAPER HANDLING FUNCTIONS. **FREE PRINTER LEAD** **FREE MEMBERSHIP**

179.99

INK CARTRIDGE FOR BJ10EX19.99
RIBBON (COLOUR) FOR CITIZEN SWIFT 9, 24, 200, 224 OR 240C14.99
RIBBON FOR CITIZEN SWIFT 24, 224 OR 2406.99
RIBBON FOR CITIZEN SWIFT 9 OR 120D+6.99
PRINTER LEAD (PARALLEL) FOR AMIGA, ATARI ST OR PC7.99
DUST COVER FOR 80 COLUMN PRINTER (CLEAR PVC)4.99

MISCELLANEOUS



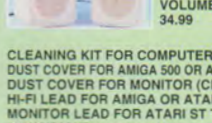
EXTERNAL 3.5" DISK DRIVE FOR ATARI ST WITH SONY/CITIZEN DRIVE MECHANISM. 1 MEG CAPACITY WITH COLOUR MATCHED METAL CASE AND LONG REACH CONNECTION CABLE. 49.99



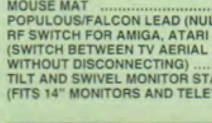
NAKSHA MOUSE FOR AMIGA OR ATARI ST WITH OPERATION STEALTH 24.99



POWER SCAN HAND SCANNER FOR ATARI ST 100-400DPI (INCLUDES SOFTWARE) 89.99



SQUIK MOUSE FOR AMIGA OR ATARI ST 12.99



ZYDEC STEREO SPEAKERS FOR AMIGA OR ATARI ST WITH BUILT-IN AMPLIFIER AND VOLUME CONTROLS. 34.99

CLEANING KIT FOR COMPUTERS (INCLUDES VACUUM)19.99
DUST COVER FOR AMIGA 500 OR ATARI ST (CLEAR PVC)4.99
DUST COVER FOR MONITOR (CLEAR PVC)4.99
HI-FI LEAD FOR AMIGA OR ATARI ST (STANDARD PHONO INPUT)3.99
MONITOR LEAD FOR ATARI ST TO PHILIPS CM833 MK2 MONITOR7.99
MOUSE MAT4.99
POPULOUS/FALCON LEAD (NULL MODEM CABLE)7.99
RF SWITCH FOR AMIGA, ATARI ST OR CONSOLE (SWITCH BETWEEN TV AERIAL AND COMPUTER)3.99
TILT AND SWIVEL MONITOR STAND (FITS 14" MONITORS AND TELEVISIONS)14.99

NEW - THE LATEST IN HAND-HELD ENTERTAINMENT



QUICKSHOT SUPERVISION HAND-HELD CONSOLE
WITH STEREO EARPHONES, BATTERIES AND CRYST BALL GAME. **FREE GRAND PRIX GAME**

GAMES

2 IN 1 (HASH BLOCK AND EAGLE PLAN)7.99
ALIEN7.99
BLOCK BUSTER7.99
CARRIER7.99
CHALLENGER TANK7.99
CHIMERA9.99
GRAND PRIX9.99
HERO KID7.99
HONEY BEE7.99
OLYMPIC TRIALS9.99
P52 SEA BATTLE7.99
PAC BOY AND MOUSE7.99
PENGUIN HIDEOUT9.99
POLICE BUST7.99
SUPER BLOCK (3 GAMES IN ONE)7.99
SUPER PANG9.99
TENNIS PRO '929.99

JOYSTICKS



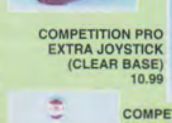
CHEETAH "ALIEN 3" JOYSTICK 12.99



CHEETAH "BART SIMPSON" JOYSTICK 12.99



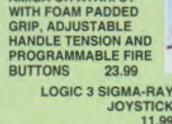
CHEETAH BUG JOYSTICK 13.99



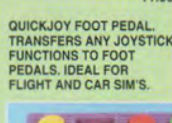
COMPETITION PRO EXTRA JOYSTICK (CLEAR BASE) 10.99



COMPETITION PRO STAR EXTRA GG5785 14.99



LOGIC 3 SIGMA-RAY JOYSTICK 11.99



QUICKJOY JET FIGHTER JOYSTICK 11.99



QUICKJOY Q1 JOYSTICK (MICRO-SWITCHED) 6.99



QUICKJOY TOP STAR JOYSTICK 18.99



QUICKSHOT 111A TURBO 2 JOYSTICK 9.99



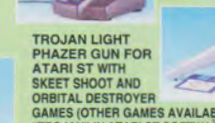
QUICKSHOT 127 STARFIGHTER REMOTE CONTROLLER WITH TWO INFRA-RED JOYPADS 29.99



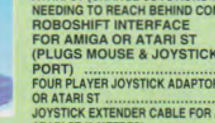
QUICKSHOT 128F MAVERICK 1 JOYSTICK 12.99



QUICKSHOT 137F PYTHON JOYSTICK 9.99



QUICKSHOT 149 INTRUDER 1 JOYSTICK 22.99



QUICKSHOT 155 AVIATOR 1 JOYSTICK 22.99



TROJAN LIGHT PHASER GUN FOR ATARI ST WITH SHOOT AND ORBITAL DESTROYER GAMES (OTHER GAMES AVAILABLE - SEE "TROJAN" IN ATARI ST SOFTWARE LIST) 24.99



MOUSE MAT4.99
PORT EXTENSION ADAPTOR FOR AMIGA OR ATARI ST (CHANGE JOYSTICKS WITHOUT NEEDING TO REACH BEHIND COMPUTER) 5.99
ROBOSHIFT INTERFACE FOR AMIGA OR ATARI ST (PLUGS MOUSE & JOYSTICK INTO ONE PORT)14.99
FOUR PLAYER JOYSTICK ADAPTOR FOR AMIGA OR ATARI ST7.99
JOYSTICK EXTENDER CABLE FOR AMIGA OR ATARI ST (3 METRES)6.99



£2000 WORTH OF PRIZES TO BE WON IN THE BIG COMPETITION! FULL DETAILS IN THE NRG CLUB MAGAZINE

DISKS, BOXES ETC.



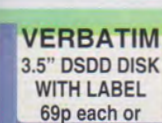
BANX DISK BOX 3.5" (80) STACKABLE 9.99
DELUXE DISK BOX 3.5" (80), LOCKABLE, DIVIDERS 10.99



DISK BOX 3.5" (10 CAPACITY)1.99
DISK BOX 3.5" (120) LOCKABLE, DIVIDERS9.99
DISK BOX 3.5" (80) LOCKABLE, DIVIDERS7.99
3.5" DISK HEAD CLEANER3.99
10 PACK GOLDSTAR 5.25" DSDD DISKS (96 TPI, 720K)2.99
10 PACK GOLDSTAR 5.25" HIGH DENSITY DISKS (1.2 MEG)3.99
PACK OF 20 3.5" GOLDSTAR HIGH DENSITY DISKS WITH LABELS15.99



3.5" GOLDSTAR HIGH DENSITY DISKS (1.4 MB) 99p each
3.5" DSDD VERBATIM DISK WITH LABEL 99p each



PACK OF 50 VERBATIM 3.5" DSDD DISKS WITH LABELS22.99
PACK OF 10 TDK 3.5" MF-2DD DISKS (DSDD) 6.99
PACK OF 10 TDK 3.5" MF-2HD DISKS (HIGH DENSITY) 13.99



VERBATIM 3.5" DSDD DISK WITH LABEL 69p each or **22.99 FOR 50**

SCART TELEVISIONS GIVE MONITOR QUALITY PICTURES



PHILIPS 3332 15" FST COLOUR TELEVISION/MONITOR 214.99

FREE SCART LEAD (STATE AMIGA, ATARI ST, MEGADRIE OR SNES)
FREE SPECIAL RESERVE MEMBERSHIP



SONY KVM1410U 14" FST COLOUR TELEVISION/MONITOR 199.99

FREE SCART LEAD (STATE AMIGA, ATARI ST, MEGADRIE OR SNES)
FREE SPECIAL RESERVE MEMBERSHIP

CALL 0279 600204 FOR OUR 8 PAGE COLOUR CATALOGUE

ATARI LYNX 2



ATARI LYNX 2 BATMAN PACK WITH BATMAN RETURNS GAME 99.99
FREE MAINS ADAPTOR **FREE MEMBERSHIP**

LYNX GAMES

APB17.99
BASEBALL HEROES23.99
BASKETBALL23.99
BATMAN RETURNS27.99
BILL AND TED'S EXCELLENT ADVENTURE23.99
BLOCK OUT16.99
BLUE LIGHTNING23.99
CABAL23.99
CHECKERED FLAG23.99
CHIPS CHALLENGE16.99
CRYSTAL MINES 222.99
DAEMONSGATE23.99
DINO OLYMPICS23.99
DIRTY LARRY23.99
RENEGADE COP23.99
DRACULA27.99
ELECTRO COP16.99
GATES OF ZENDECON17.99
HOCKEY23.99
ISHIDO19.99
JIMMY CONNORS' CHALLENGE23.99
KLAX23.99
LEMMINGS23.99
LYNX CASINO23.99
MALIBU BIKINI23.99
MS DACMAN16.99
NFL FOOTBALL23.99
NINJA GAIDEN23.99
NINJA NERD23.99
PACLAND16.99
PAPERBOY17.99
PINBALL JAM23.99
PITFIGHTER27.99
RAIDERS23.99
RAI-DEN23.99
RAMPAGE21.99
ROBOSQUASH15.99
ROBOTRON 208416.99
ROLLING THUNDER23.99
RYGAR23.99
SHADOW OF THE BEAST23.99
SHANGHAI17.99
SLIMEWORLD19.99
SPACE WAR23.99
STEEL TALONS23.99
SWITCHBLADE 223.99
TOKI23.99
TOURNAMENT19.99
CYBERBALL19.99
TURBO SUB17.99
ULTRA STAR23.99
RAIDERS23.99
VINDICATORS23.99
WARBIRDS23.99
XENOPHOB23.99
ZARLOU MERCENARY23.99

Call 0279 600204 for a FREE colour catalogue

Special Reserve



CHOOSE YOUR ATARI ST GAMES BELOW ALL AT AMAZING PRICES - NO HIDDEN POSTAGE CHARGE TO THE UK !

3D CONSTRUCTION KIT.....14.99	DUNGEON MASTER & CHAOS STRIKES BACK.....14.99	INDIANA JONES 2 ACTION (FATE OF ATLANTIS).....17.49	NICKY BOOM.....16.99	SHOOT-EM-UP CONSTRUCTION KIT.....7.99
3D CONSTRUCTION KIT 2.....32.49	DYNA BLASTERS.....19.99	INDY HEAT.....16.99	NIGEL MANSELL'S WORLD CHAMPIONSHIP.....18.49	SHUTTLE.....19.99
A320 AIR-BUS.....21.99	ELITE.....10.99	INTERNATIONAL SPORTS CHALLENGE.....19.49	NITRO.....6.99	SILENT SERVICE 2 (1 MEG).....22.99
ADAMS FAMILY (1 MEG).....16.99	EPIC.....10.49	ISHAR - LEGEND OF THE FORTRESS.....10.49	NODDY'S PLAYTIME (EDUCATIONAL).....17.99	SIM CITY & POPULOUS.....16.99
ADI ENGLISH (12-13).....16.99	ESCAPE FROM THE PLANET.....6.99	JAGUAR XJ220 (1 MEG).....12.99	PROGRAM FOR CHILDREN AGED 3+.....17.99	SPACE CRUSADE.....12.99
ADI ENGLISH (13-14).....16.99	OF THE ROBOT MONSTERS.....19.49	JAMES POND 2 - ROBOCO.....16.99	OPERATION WOLF.....6.99	SPACE CRUSADE DATA DISK.....10.99
ADI FRENCH (11-12).....16.99	ESPAÑA-THE GAMES 92 (1 MEG).....19.49	JIMMY WHITES SNOOKER.....14.99	PAINTWORKS (ART PACKAGE).....6.99	SPECIAL FORCES.....22.99
ADI FRENCH (12-13).....16.99	F15 STRIKE EAGLE 2.....11.99	JINXTER (MSCROLLS).....3.99	PANG.....6.99	STARCROSS.....13.99
ADI FRENCH (13-14).....16.99	F16 FALCON.....10.99	JOHN BARNES EUROPEAN FOOTBALL.....15.49	PARASOL STARS.....16.99	STORM MASTER.....18.49
ADI MATHS (11-12).....16.99	FANTASY PAK.....13.99	KICK OFF 2 D/S.....6.99	PICK 'N' PILE.....4.99	STRATEGY MASTERS (POPULOUS, HUNTER, SPIRIT OF EXCALIBUR, CHESSPLAYER 2150, DEUTEROS).....20.99
ADI MATHS (12-13).....16.99	COLORADO, BOSTON BOMB CLUB, CRYSTALS OF ARBOREA.....13.99	KICK OFF 2 D/S (SIERRA) D/S.....10.99	PIRATES.....16.99	STREETFIGHTER 2.....18.49
ADI MATHS (13-14).....16.99	FIRE & FORGET 2.....7.99	KNIGHTS OF THE SKY (1 MEG).....22.99	PLAYER MANAGER.....8.99	STRIKER.....15.99
ADVANTAGE TENNIS.....16.99	FIRE & ICE.....16.99	KNIGHTS OF THE SKY (1 MEG).....22.99	POPULOUS & SIM CITY.....16.99	STUART PEARCE'S SOCCER SELECTIONS (KICK OFF 2, MICROPROSE SOCCER, MANCHESTER UNITED, INTERNATIONAL SOCCER).....19.99
AFTERBURNER.....5.99	FIRST SAMURAI + MEGA LO MANIA.....13.99	LEANDER.....10.99	POPULOUS 2 (1 MEG).....19.49	SUPER CARS 2.....7.99
AIR BIKES.....17.99	FLAMES OF FREEDOM (MIDWINTER 2).....11.99	LEATHER GODDESSES.....8.99	POWER-UP.....16.99	SUPER HANG ON.....6.99
AIR SEA SUPREMACY.....14.99	FORMULA 1 GRAND PRIX.....14.99	LEGENDS OF VALOUR.....23.99	POWERMONGER D/S.....18.49	SWITCHBLADE 2.....7.99
GUNSHIP, SILENT SERVICE, P47, F15 STRIKE EAGLE, CARRIER COMMAND.....19.99	FUN SCHOOL 2 (2-5).....7.99	LEISURE SUIT LARRY 3 VALUE PACK.....18.99	POWERMONGER WW 1 DATA DISK.....11.49	THE MANAGER.....19.99
ANOTHER WORLD.....16.99	FUN SCHOOL 2 (6-8).....7.99	WITH SPACE QUEST 3 AND HOYLES BOOK OF GAMES 2 (TRIPLE PACK).....18.99	PREMIER MANAGER.....16.99	THUNDERHAWK.....9.99
AQUATIC GAMES.....16.99	FUN SCHOOL 3 (2-5).....16.99	LEMMINGS.....12.49	PRINCE OF PERSIA.....19.99	TITUS THE FOX.....9.49
ARCHER MACLEAN'S POOL.....17.49	FUN SCHOOL 3 (5-7).....16.99	LEMMINGS 2 (OUT FEBRUARY).....20.99	PRO TENNIS TOUR 2.....16.99	TROJAN - CYBER ASSAULT (LIGHT PHAZER GAME).....9.99
AWESOME.....7.99	FUN SCHOOL 3 (7-9).....16.99	LEMMINGS 2 (OUT FEBRUARY).....20.99	PROTEXT VERSION 4.3.....38.99	TROJAN - FIRESTAR (LIGHT PHAZER GAME).....9.99
B.A.T. 2.....22.99	FUN SCHOOL 4 (2-5).....16.99	LETHAL WEAPON (1 MEG).....16.99	PUSH-OVER.....16.99	TROJAN - THE ENFORCER (LIGHT PHAZER GAME).....9.99
BARBARIAN 2 (PSYGNOSIS).....14.99	FUN SCHOOL 4 (5-7).....16.99	LOMBARD RAC RALLY.....6.99	QUEST & GLORY (BLOODWYCH, MIDWINTER, ADAMER, IRON LORD).....13.99	TURRICAN.....6.99
BATMAN THE MOVIE.....6.99	FUTURE WARS.....16.99	LOTUS 3 - THE FINAL CHALLENGE (1 MEG).....16.49	RAINBOW COLLECTION (BUBBLE BOBBLE, RAINBOW ISLANDS, NEW ZEALAND STORY).....16.99	ULTIMA 5.....16.99
BATTLE ISLE.....19.99	GAUNTLET 2.....10.99	LOTUS TURBO CHALLENGE 2.....11.99	RAMPART.....16.99	ULTIMATE GOLF.....7.99
BATTLE OF BRITAIN D/S.....12.99	GAUNTLET 3.....16.99	LURE OF THE TEMPTRESS (1 MEG).....19.99	RAVING MAD.....16.99	UNNITED.....6.99
BATTLEHAWKS 1942.....10.99	GOLDEN AXE.....8.49	MAGIC POCKETS.....16.99	REACH FOR THE SKIES.....18.99	UTOPIA.....11.99
BEACH VOLLEY.....6.99	GOLF WORLD CLASS LEADERBOARD.....6.99	MAGIC WORLDS.....17.49	REALMS.....16.99	UTOPIA NEW WORLDS DATA DISK.....10.99
BEYOND ZORK (INFOCOM).....4.99	GRAHAM TAYLOR'S SOCCER MANAGER.....10.99	MEGA SPORTS.....16.99	REACH FOR THE SKIES.....18.99	VROOM.....12.49
BLUES BROTHERS.....8.99	HARLEQUIN.....12.99	(SUMMER GAMES 1 & 2, WINTER GAMES).....16.99	REALMS.....16.99	VROOM DATA DISK.....12.49
BOXING MANAGER.....6.99	HEAD OVER HEELS.....6.99	MICRO ENGLISH (8 YRS TO GCSE).....16.99	REACH FOR THE SKIES.....18.99	WARHEAD.....6.99
BREACH 2 (ENHANCED).....17.99	HEIMDALL (1 MEG).....12.99	MICRO ENGLISH (8 YRS TO GCSE).....16.99	REALMS.....16.99	WIZ-KID.....16.99
BUNNY BRICKS.....15.99	HEROQUEST + DATA DISK.....10.99	MICRO ENGLISH (8 YRS TO GCSE).....16.99	REACH FOR THE SKIES.....18.99	WWF WRESTLING.....16.99
CAESAR.....17.99	HEROQUEST EXPANSION.....10.99	MICRO ENGLISH (8 YRS TO GCSE).....16.99	REACH FOR THE SKIES.....18.99	WWF WRESTLING 2.....16.99
CAPTIVE.....16.99	RETURN OF THE WITCH LORD.....10.99	MICRO FRENCH (BEGINNER TO GCSE).....16.99	REACH FOR THE SKIES.....18.99	XENON 2 MEGABLAST.....7.99
CASTLES.....8.99	HITCHHIKERS GUIDE.....8.99	CONFORMS TO NATIONAL CURRICULUM.....16.99	REACH FOR THE SKIES.....18.99	ZAK MCKRACKEN.....9.99
CHAMPIONS (MANCHESTER UTD, BOXING MANAGER, J.KHANN SQUASH).....12.99	HOLLYWOOD COLLECTION (ROBOCOP, GHOSTBUSTERS 2, INDIANA JONES ACTION, BATMAN THE MOVIE) D/S.....9.99	CONFORMS TO NATIONAL CURRICULUM.....16.99	REACH FOR THE SKIES.....18.99	
CHAMPIONSHIP MANAGER.....12.99	HOMER ACCOUNTS 2.....37.99	MICRO MATHS (11 YRS TO GCSE).....16.99	REACH FOR THE SKIES.....18.99	
CHAOS ENGINE.....16.99	HOOK.....16.99	CONFORMS TO NATIONAL CURRICULUM.....16.99	REACH FOR THE SKIES.....18.99	
CHUCK ROCK.....8.99	HUMANS.....6.99	MICROPROSE GOLF.....13.99	REACH FOR THE SKIES.....18.99	
COOL WORLD.....16.99	INDIANA JONES ADVENTURE.....7.99	MIDNIGHT RESISTANCE.....6.99	REACH FOR THE SKIES.....18.99	
CORRUPTION (MSCROLLS).....3.99		NEW ZEALAND STORY.....6.99	REACH FOR THE SKIES.....18.99	
CRAZY CARS 2.....7.99			REACH FOR THE SKIES.....18.99	
CRAZY CARS 3.....7.99			REACH FOR THE SKIES.....18.99	
O-GENERATION.....13.99			REACH FOR THE SKIES.....18.99	
DEJA V.....6.99			REACH FOR THE SKIES.....18.99	
DUNE.....19.99			REACH FOR THE SKIES.....18.99	

CALL 0279 600204
Open to 8pm Weekdays
and to 5pm Weekends
FOR GRABS IN OUR LATEST COMPETITION
ARE AN AMIGA, 7 SUPER NES's AND
7 MEGADRIVES WORTH OVER £2000!

Inter-Mediate Ltd. Registered Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. Inevitably, some games may not yet be released. Please phone Sales on 0279 600204 for latest release dates and stock availability. We reserve the right to change prices and offers without prior notification. Please ring for latest information. E & O.E.

We only supply members but you can order as you join.
ANNUAL MEMBERSHIP: UK £6.99 EC £8.99 WORLD £10.99

The Special Reserve full colour 48 page club magazine *NRG* is sent to all members bi-monthly. *NRG* features full reviews of new games plus mini-reviews, new products, Special Reserve charts, Release Schedule and hundreds of special offers.

PLUS - EVERY ISSUE CONTAINS
£30 worth of money-off coupons
to save even more money off our amazing prices

NRG also contains competitions to win ££££s worth of prizes. Currently on offer is a chance to enter THE BIG COMPETITION in which First Prize consists of an AMIGA, SUPER NES AND A MEGADRIVE, yes all three! There are 6 SUPER NES's and 6 MEGADRIVES up for grabs to the lucky runners up too! Closing date: Feb 28th 1993.

We sell games and accessories, all at amazing prices, for Megadrive, Master System, Game Gear, Super NES, Gameboy, NES, Lynx, Amiga, Atari ST, IBM PC and CDTV.

Best Service, Best Prices, Biggest Selection

120,000 people have joined Special Reserve, so don't delay, join today!

You can phone in your order or use this coupon ➤

WE ONLY SUPPLY MEMBERS BUT YOU CAN ORDER AS YOU JOIN.
THERE IS A SURCHARGE OF 50p PER GAME ON TELEPHONED ORDERS.
(PLEASE PRINT IN BLOCK CAPITALS)

Name _____

Address _____

Postcode _____

Phone _____ Machine _____

Enter membership number (if applicable) or
Membership £6.99 UK, £8.99 EC, £10.99 World

item _____

item _____

item _____

item _____

ALL PRICES INCLUDE UK POSTAGE & VAT £

Cheque/P.O./Access/Mastercard/Switch/Visa _____ Switch Issue No _____

Credit card expiry date _____ Signature _____

Cheques payable to: **SPECIAL RESERVE**
P.O. BOX 847, HARLOW, CM21 9PH
Overseas Orders Surcharge (EC or World): Software orders please add £2.00 per item. Non-software items please add 25%. Hardware items supplied to UK mainland only.
Overseas orders must be paid by credit card.

Printed in the U.K.

Hewlett Packard has come up with another first. The HP Laserjet 4 features a resolution of 600 dpi and a range of improvements over its predecessors. We give you the lowdown on page 46.

ST REVIEW ISSUE 9
JANUARY 1993



Editor: Garth Sumpter
Production Editor: Heather Turley
Technical Editor: Vic Lennard
Technical Writer: Tony Kaye
VFM Editor: Alan Dykes
Art Editor: Gordon Barrick
Junior Designers: Becky Willis, Jo Winslow
Additional Design: Kerrin Hands
Contributors: Mark Baines, Andrew Wright, Tony Dillon, Alan Dykes, Ofir Gal, Nial Grimes, Paul Keller, Laura Taylor, Mark Patterson, Steve Keen, John Mallinson
Managing Editor: Steve James
Group Advertising Manager: Nigel Taylor
Deputy Advertising Manager: Michelle Gardiner
Sales Executive: Sarah Connell
Production Assistant: Remzi Salih
Classified Production Manager: Esther Rodd

Marketing Manager: Marc Swallow
Marketing Exec: Sarah Hillard
Publisher: Garry Williams

Atari ST Review,
Priory Court,
30-32 Farringdon Lane,
London EC1R 3AU

Cover Disk Returns: Page 17

Advertising and Editorial
Tel: 071 972 6700
Fax: 071 972 6701

Distribution
BBC Frontline Ltd,
Park House, Park Road,
Peterborough PE1 2TR
Tel: 0733 555161

Subscriptions: PO Box 500,
Leicester LE99 0AA.
Tel: 0858 410510

Back issues:
PO Box 500
Leicester LE99 0AA.
Tel: 0858 410510



Combat is the name of the game in Screen Scene this month, as we preview this year's biggest coin-op conversion – US Gold's *Streetfighter 2* (left). Meanwhile, *Sabre Team* from Krisalis takes you into the secret world of a crack SAS team (right).



ON THIS MONTH'S COVERDISKS

CYBER PAINT

Part two of the great Cyber Series giveaway is a full painting package for your animations. Use it in conjunction with Cyber Studio or on its own.

KID GP

Another complete game by Dave Munsie from the USA. This time it's an addictive platform game.

ALSO ON THIS MONTH'S DISK

Lots to play with and 'pep up' your ST including...

MORECLIP ART – Another selection of clip art for your DTP documents, this time with a Christmas flavour.

PLOP – An exclusive puzzle game. If you can't play the game, read the book!

TERADESK – A complete PD alternative desktop to rival *Neodesk* or even TOS 2.06.

RDE – A useful RAMdisk utility that even allows you to save the complete configuration, including contents, for future use.

HANDS-ON MIDI – More MIDI music for your sequencer.

FASTCOPY 3 – The best copying and formatting program in the public domain. This will back up *Timeworks* from issue seven and other non-standard format disks.

PICSWITCH – Convert Degas .PI? format pictures between different resolutions and formats with this useful utility..

THREE UTILITIES – Identify your setup quickly, easily and accurately.



FEATURES

30 THAT WAS THE YEAR THAT WAS

Another year is over, and what a great one it was! Not convinced? Take a look at our review of the year and you'll see what we mean!

36 GET ORGANISED

Part two of our round-up of personal organisers looks at the Atari Portfolio, Amstrad Notebook and a selection of the best from Casio and Sharp.

42 FAST FORWARD

Getting frustrated waiting for your screen to redraw? Is your system too slow? We compare and contrast two of the best software accelerators on the market and give you our verdict.

44 FANTASTIC FONTS

Fontkit Plus has always been regarded as the best bitmap font editor. So has the best got better? We take a look at the latest version and let you know what we think.

46 DAWNING OF A NEW ERA

The HP Laserjet 4 looks set to break the mould of laser printers. With its superior print quality and extended range of fonts, it's definitely one of the classiest printers that we've seen in a while. Find out exactly why and just where all this futuristic machine is likely to lead us.

50 A LOAD OF NEW TOS

TOS 2.06 is available as an upgrade for your ST. It's an awkward process to install, so we visited a professional to see how it is fitted into an STFM and show you how, step by step.

54 PIN MONEY

Seikosha's new entry-level 24-pin dot matrix printer, the SL-90, enters the market this month and seems to be a bargain at under £200. So what exactly do you get for your money?

59 IMAGE CONSCIOUS

Having problems taking a snapshot of your screen? The ST Club's latest gem, *Imagecopy*, could be the answer.

REGULARS

6 NEWS

Games producer Ocean moves into the charity arena with its latest game, Epson announces new laser printers, and we take a behind-the-scenes look at *Space Junk* for the Falcon.

15 COVERDISKS

We continue our Cyber Series on this month's disks with *Cyber Paint*. This flexible package can be used with *Cyber Studio* which we gave you last month or independently. Full tutorials begin on page 16. There are a couple of great games for you to play, *Plop* and *Kid GP*, and a host of utilities to help pep up your ST. If you want a taste of what an alternative desktop can do for you, we have *Teradesk*, a complete PD desktop with many of the features found in TOS 2.06 and *Neodesk*. As ever, full instructions for loading and using our disks are provided.

62 SCREEN SCENE

It's been eagerly awaited and it's finally here. Is *Archer Maclean's Pool* just a poor imitation of *Jimmy White's Snooker*? We think not! We saw it, liked it and gave it an essential buy award. If *Pool*'s not your thing, try out such combatting masterpieces as *Sabre Team* and our preview of *Streetfighter 2*. Or maybe you're feeling more than a little crazy after the euphoria of the Christmas season? US Gold's *Raving Mad* compilation could be just what you need.

88 PD ZONE

If you've enjoyed this month's cover disk, we've got reviews of the best PD animation packages currently available, as well as our usual round-up of the latest utilities and game releases and coupons to make buying easier.

WIN A LYNX!!!
YOU COULD BE IN WITH
A CHANCE OF WINNING
ONE OF FIVE ATARI
LYNX GAMES
PACKAGES IN OUR
PHONE-IN
COMPETITION
TURN TO PAGE 60



The Falcon was one of the highlights of last year. See our feature starting on page 30.

SCREEN SCENE

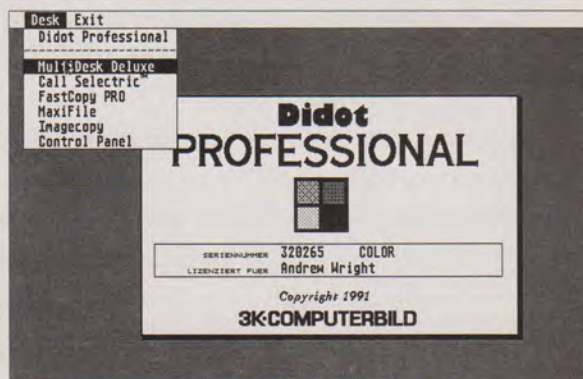
Action, strategy and sport all feature in our games round-up this month

AMBERSTAR	64
ARCHER MACLEAN'S POOL	68
RAMPART	72
LEEDS UNITED CHAMPIONS	74
SABRE TEAM	76
INDIANA JONES AND THE FATE OF	
ATLANTIS	78
SHADOWWORLDS	81
RAVING MAD	82
VFM - BUDGET BUYS	84

ST BUYER

Everything for the ST enthusiast under one roof. This month learn to use DA's...

PROBLEM SOLVED - DESK ACCESSORIES	100
START YOUR OWN PD LIBRARY	104
HISOFT BASIC TUTORIAL	106
MIDI MONTHLY	111
ASK THE EXPERTS	122
LETTERS	124
LEARN THE LINGO	128
CHARTS	129
THE BLITTER END	130



Get to grips with desk accessories on page 100.

**PUNTER
POWER!**
CHECK OUT OUR
READER OFFERS ON
PAGE 56

NEWS



Hello and welcome to the latest issue of ST Review.

I suppose I shouldn't break with conventions at this time of the year and wish you all a Merry

Christmas and the best of luck for the coming New Year. Whilst this may be a (slightly) premature time to be looking at 1993, it is a time for great expectations for better, brighter and perhaps even cheaper technology to hit the streets.

Hopefully, we should also see some proper ST magazines hit the streets too. Our main rivals don't seem to be able to keep an editor on a magazine for any great length of time lately – a testament to the fast-paced world of publishing or not? You can draw your own conclusions, but mine is coloured by the fact that in just nine issues of ST Review, I've seen no less than five different editors for just two of our main rivals – and I thought that ST editors could become an endangered species.

Commitment to an ideal is found within individuals and within companies. ST Review has this, (with a degree of continuity so far unmatched by our rivals), to provide ST owners everywhere with the most informed, user friendly and best value guide to the ST. In the New Year we will continue to provide this with unparalleled editorial, reader offers and cover disks.

There's everything to look forward to in 1993 and I await with anticipation. I also hope to be seeing some familiar faces out there too – amongst you, the readers...

FALCON HATCHES VIDEO NASTIES

The power of the Falcon as a multi-media machine will give rise to completely new techniques in game production – Space Junk from Mirage breaks the mould

Much has been said of the power of Atari's latest machine, the Falcon 030, but very little has been seen of the games currently in development that will take full advantage of its multi-media technology.

Enter Mirage and the eagerly awaited **Space Junk**. This game could well be the first classic game written for the Falcon – whilst many software producers have stated that their current games will be converted to the Falcon, few of them are actually developing new games on the machine and taking full advantage of its superior technology.

Space Junk, however, is different. The game is quite some way from completion at the moment, but already it has shown completely new aspects of game design in its use of digitised video for sequences. The extensive use of video also means that methods used elsewhere within the entertainment industry are now being employed.

Space Junk follows the fortunes of one Randolph Grrr Zion, who has crash landed on a planet in the desert and must now survive, battling against the hostile desert and some of the natives who appear in video form in the game. Not a new plot by any means but its the way in which the aliens are presented which has added something really special to the game.

Most encounters with aliens have been shot to video, with human actors in alien masks and suits providing the action. Each alien's face has been painstakingly made as part of Imagetek's new, in-house system of puppet animation. The technique called IMAGINATION, involves making masks using a process well known in the film and theatre industries.

PUTTING ON A FACE

Making the latex masks for the Space Junk video sequences is not an easy task...



Trying to relax during this stage cannot be easy...

This man is about to become immobilised for hours as he is fitted up for his mask. First, cover the hair with cling film...



A pink alginate (as used by dentists) is painted directly onto the subject. This will mould to the face without sticking and sets like wet rubber.



Once the alginate is in place, a plaster must be added to give rigidity to the finished mould.



Once dry, the plaster mould is split in two and removed before removing the alginate.



Several hours later, our subject finally emerges blinking into the light.



It's twins Mrs Thompson!



The finished cast is then made up using oil-based clay into some horrific, alien face and then a second plaster cast is made. This is then removed and the clay scraped off the first mould. The second cast will now fit over the first cast and there will be a void which once injected with a latex rubber, will become a mask that will fit our original model perfectly!



The time has come for you to flex those biceps and stand strong against the onslaught from the competition. See if you have got what it takes to become the ultimate World Warrior.

Ask your dealer when!





CAPCOM
USA

U.S. GOLD

Available on: Spectrum cassette,
C64, Amstrad CPC cassette & disk,
Atari ST, Amiga and PC Compatibles.

Street Fighter™ II ©1992 Capcom USA Inc. All rights reserved. Street Fighter™ II is a registered trademark of Capcom USA Inc. Manufactured and distributed under license from Capcom USA Inc by U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham, B67AX.

GASTEINER

PhiHong  **Seagate Quantum™**
Steinberg C-LAB GST 

Unit 2
 Millmead Business Centre
 Millmead Road
 London N17 9QU
 Tel: 081 365 1151
 Fax: 081 885 1953

Optical Mouse



St Format 81%
 Cu Amiga 79%

Superb 300dpi Optical Mouse with effortless micro switch buttons. Fast smooth and reliable. Includes Optical Mouse Pad and Holder

£26.00

Optical Pen Mouse



A stylish Pen mouse with quality construction and smooth fast movement. Micro switch buttons. Ideal for DTP artwork, etc. Includes Optical Pad

£35.95

Trackballs



Stylish three button trackballs, with third button supporting auto fire and click and hold

With duel colour Crystal Ball

£29.95

GOLD AWARD WINNER IN ST FORMAT 92%

£34.95

Mega Mouse



A 290dpi high resolution Opto-Mechanical Mouse. Top quality construction ensures rapid and smooth movement, with micro switch buttons.

Mouse only

Mouse with hard mat and mouse holder

£10.95

£14.95

GOLD AWARD WINNER IN AMIGA FORMAT 90%

Power

Blitz Turbo **£25.00**

PC 720P External drive **£50.00**

PC 720B with Blitz **£65.00**

5 1/4" Disk Drive **£95.00**

Power scanner **£95.00**

The ultimate Cartridge **£25.00**

Vortex

D386 Emulator runs at 16 MHZ. True multitasking in PC mode on ST

386 SX-16 **£279.00**

387 Co-Pro **£115.00**

Fast RAM Cache **£30.00**

Monitors

SM 124 **£139.00**

SM 146 **£149.00**

Philips 8833II **£195.00**

Atari SCII435 **£209.00**

Multisync Monitor for ST, STE, Mega STE and Falcon **£349.00**

Multisync Switch Box **£29.95**

Auto Mouse/ Joystick Switch



St Format 78%

Automatic Switcher between two input devices with click of a button. E.g. mouse/mouse, mouse/joystick, joystick/joystick

£12.95

Real Time Clock



St Format 80%

This clock is equipped with a thru port, as to connect other peripherals.


£14.95


PhiHong

Replacement Power Supply for ST, STF and STE **£29.95**


Official Atari Internal Disk Drive **£45.00**

At these price and not at exchange prices

 **GoldenImage Mouse with Mat. £13.95**

 **The Brush Mouse with D-Paint £19.95**

 **GoldenImage Hand Scanner £109.00**

 **GoldenImage External 3.5" Drive £59.00**

 **GoldenImage Optical mouse £29.95**

Peripherals

Monitor Switch Box Colour/ Mono **£13.95**

Multisync Switch Box **£29.95**

Printer Cable **£6.00**

Modem Cable **£6.00**

Serial Cable **£6.00**

Philips/Atari STE Cable **£10.00**

10 Disks **£7.00**

Cordless Infrared Mouse **£45.00**

Marpet

XTRAM Deluxe Simm Upgrade for ST STF and Mega ST

1/2 MB **£ 39.00**

2 Mb **£75.00**

4 Mb **£115.00**

Gasteiner STE and Mega STE Upgrade

1/2 Mb **£12.00**

2 Mb **£50.00**

4 Mb **£100.00**

TOS 2.06

STFM **£49.95**

STE **£49.95**

256 Greyscale Scanners

Total solution for scanning A4 images

Features :- True greyscales, 100-400 dpi, 105mm head, OCR option

Top quality hardware with the latest version of software from Migraph. Allows real time scanning, provides powerful editing/painting features. Compatible (imports/exports) IFF,IMG,PCX,TIFF and MACPAINT formats. Compatible with all Atari's

Touch UP and Merge It Software

Touch UP, Merge It and Special OCR software.

Minimum system requirement
 2Mb RAM, and a Hard Disk

£119.95

£199.00



Full OCR Version Software Available

£165.00

Word Processing Software

1St Word + **£55.00**
 Calligrapher Pro **£79.00**
 Calligrapher Gold **£109.00**
 That's Write V1.4 **£19.00**

DTP Software

Pagestream V2.2 **£149.00**
 Timeworks Publishing 2 **£80.00**
 Calamus V1.9 **£129.00**
 Calamus SL **£339.00**
 OCR Software **£165.00**
 Touch Up **£49.00**
 Easy Draw **£34.00**
 Cyber Studio **£25.00**
 Cyber Control **£25.00**
 Cyber Paint **£25.00**
 Human Design Disk **£10.00**
 Future Design disk **£10.00**
 Architectural Design Disk **£10.00**
 3D Font 1 **£10.00**
 CAD 3D **£10.00**
 CAD 3D Developers Disk **£10.00**
 Neo Desk 3 **£28.00**
 That's FunFace **£18.00**
 Signs + Banners **£15.00**
 Calendar + Stationary **£15.00**
 Greeting Cards **£15.00**

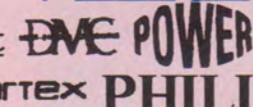
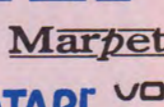
Music Software

C-Lab Notator **£279.00**
 C-Lab Creator **£179.00**
 Cubeat **£150.00**
 Cubase **£279.00**
 Cubase Light **£150.00**

Please add £3.50 postage and packing to all orders under £100.00 and Orders over £100.00 add £5.00 postage and packing. COURIER CHARGE £10.00. All prices include VAT. Gasteiner accepts payments by Visa, Access, Cheque or postal order.

E.&O.E. Prices subject to change without notice. Goods subject to availability. Specification subject to change without notice. All Trademarks Acknowledged.

GASTEINER



Unit 2

Millmead Business Centre

Millmead Road

London N17 9QU

Tel: 081 365 1151

Fax: 081 885 1953

COMPUTERS ATARI

520 STE 1/2Mb	£219.00
520 STE 1Mb	£230.00
520 STE 2Mb	£265.00
520 STE 4Mb	£305.00
1040 STE 1Mb	£299.00

MEGA STE

0Mb Without Hard Drive	£ 379.00
1Mb Without Hard Drive	£ 399.00
2Mb Without Hard Drive	£ 429.00
4Mb Without Hard Drive	£ 465.00
0Mb With 48Mb Seagate H/D	£ 579.00
1Mb With 48Mb Seagate H/D	£ 599.00
2Mb With 48Mb Seagate H/D	£ 629.00
4Mb With 48Mb Seagate H/D	£ 665.00
0Mb With 120Mb H/D	£ 679.00
1Mb With 120Mb H/D	£ 899.00
2Mb With 120Mb H/D	£ 929.00
4Mb With 120Mb H/D	£ 965.00
1Mb With 170Mb H/D	£ 999.00
2Mb With 170Mb H/D	£1029.00
4Mb With 170Mb H/D	£1065.00

STBOOK

1Mb 40Mb Hard Drive	£1275.00
1Mb 80Mb Hard Drive	£1475.00
limited quantity available	

FALCON

1Mb Without Hard Drive	£ 499.00
2Mb Without Hard Drive	£ 529.00
4Mb Without Hard Drive	£ 579.00
8Mb Without Hard Drive	£ 779.00
16Mb Without Hard Drive	£ 979.00
1Mb With 64Mb Hard Drive	£ 899.00
2Mb With 64Mb Hard Drive	£ 929.00
4Mb With 64Mb Hard Drive	£ 979.00
8Mb With 64Mb Hard Drive	£1179.00
16Mb With 64Mb Hard Drive	£1379.00

GASTEINER MEGA DRIVE

For ST, STE, MEGA ST, MEGA STE and FALCON

All mega drives now comes with:-

- * ICD host adaptor
- * High quality metal casing
- * Backup software
- * Power cable with plug
- * Comprehensive manual
- * 12 months back to base guarantee.

*DMA in and out (with thru' port for an extra drive/laser printer)

Feature :- Fully Autobooting ,Autoparking, Fast Access SCSI drive.

50 Mb 24Ms (Seagate)	£289.00
52 Mb 11Ms (Quantum)	£309.00
87 Mb 14Ms (Quantum)	£399.00
105 Mb 11Ms (Quantum)	£429.00
125 Mb 14Ms (Quantum)	£479.00
170Mb 17Ms	£459.00

All Quantums have minimum 64K Cache

Gasteiner Floptical 20Mb Drive £399.00

Gasteiner Floptical 20Mb Disks £20.00

Note

ICD Controller With Clock For The Above Drives, Please Add £15.00 Extra.



Bare Drives

50 Mb Seagate	£179.00
52 Mb Quantum	£199.00
105Mb Quantum	£279.00
170Mb	£349.00
20 Mb Floptical disks	£20.00

Mega STE Hard Drives

50Mb	£199.00
105Mb	£300.00
170Mb	£389.00

Prices include official Atari Mega STE Kit, Atari Host-Adpt and Software

ICD Products

Ad Speed ST	£140.00
Ad Speed STE	£160.00
AdSCSI Micro Host Adpt	£ 55.00
AdSCSI Plus (with clock)	£ 69.95
AdSCSI ST	£ 59.95
Metal Case for H/D	£ 35.00
Power Supply	£ 35.00
SCSI Cable	£ 5.00
DMA Cable	£ 5.00

ICD - THE LINK

Connects an Atari ST computer to an external SCSI hard drive, floptical drive, CD Rom

£65.00

The Link

Please add £3.50 postage and packing to all orders under £100.00 and Orders over £100.00 add £5.00 postage and packing. COURIER CHARGE £10.00. All prices include VAT.

Gasteiner accepts payments by Visa, Access, Cheque or postal order.

E.&O.E. Prices subject to change without notice. Goods subject to availability. Specification subject to change without notice. All Trademarks Acknowledged.

NEWS

UNDER STARTERS'



The Epson EPL-4300 laser printer has scalable fonts and costs £999.

A new laser and two dot matrix printers are now available from Epson. The EPL-4300 laser boasts a print speed of six pages per minute, scalable fonts and two slots for Epson and HP compatible font cards. It retails at £999.

The LX-100 is a 9-pin and the LQ-100 is a 24-pin dot matrix printer. Both come complete with a cut sheet feeder. Epson believes that owners of 24-pin printers are more likely to use cut sheets than continuous paper, so to keep the price down, the tractor feeder is a £29.95 option on the LQ model. Prices are £245 for the LQ-100 and £189 for the LX-100. Both prices include VAT.



24-pin quality printing with the LQ-100.

GASTEINER GETS TO THE POINT

New pointing devices from Gasteiner include two optical devices, a track ball and a mouse.

The track ball comes with an attachment to fix it to the side of your ST. The ball itself is operated with the thumb, is extremely comfortable to use and takes up a minimum of desk space. It retails at £29.95.

The two new optical devices take the form of a conventionally styled mouse, whilst another is shaped like a pen. Both offer 300 dots per inch (dpi) and come complete with a hard mouse mat and interface lead. The mouse costs £29.95 and the pen is £34.95.

A high-quality conventional mouse is the final addition to the Gasteiner range. The Golden Image Mk II mouse is made in Japan and has a resolution of 400 dpi, making it one of the most sensitive and smooth mice on the market. Priced at £19.95, it is slightly more expensive than most, but the quality is good.

All of the new products carry a two-year warranty. Gasteiner can be reached on 081 365 1151 or write to Gasteiner, Unit 2, Millmead Business Centre, Millmead Road, London N17 9QU.

COMIC RELIEF GAME NOSES AHEAD

Top games producer, Ocean, has hit a new first in its bid to raise money for Red Nose Day 4, taking place on Friday 12th March.

The company is releasing a new game, called *Sleepwalker*, at the end of January, and hopes to raise £500,000 for Comic Relief from the sale of the game. Described by Ocean as "wickedly funny", the game features various Comic Relief celebrities, flying Red Noses in bonus levels and sound effects and voice-overs from Lenny Henry.

Anyone who buys a copy of *Sleepwalker* will be encouraged to pit their wits against other players in aid of Comic Relief. The Red Nose Challenge will be taking place in major retail chains all over the country, and the national final will be held in Central London on Red Nose Day itself.

WE'VE GOT THE POWER!

Now you can reach us with your modem. The Power House BBS, a new bulletin board now offers an ST Review conference to complement the CIX facility that we already have.

You can leave messages for us or ask us any questions you may have through the Power House. The board operates 24 hours a day and will answer at just about any speed available.

Although a reply is not guaranteed, under normal circumstances, the board is accessed at least once a day from this end, so you can be sure that your message will be read.

The Power House BBS can be reached by calling 0234 841503.

HP LASERJET 4: THE NEXT GENERATION

Hewlett Packard has unveiled the next generation of laser printers with the launch of the Laserjet 4 and 4M. Both machines boast RISC based 600 DPI printing and superior paper handling.

The HP4 is a direct replacement for the HP Laserjet III and has several advantages over its predecessor. All HP III printer drivers are compatible and, apart from a smaller footprint and a weight reduction of six Kg, it has faster data transfer ports and two 350 sheet paper trays as standard. Options include a third tray that holds 500 sheets and a power envelope feeder that holds 75 envelopes.

Prices are £1649 for the Laserjet 4 and £2249 for the 4M (Postscript).

For more information see our review on page 48 or contact the Customer Information Centre, Hewlett Packard Limited, Cain Road, Bracknell, Berks, RG12 1HN, phone 0344 369222.



The HP Laserjet 4. Hewlett Packard marches on.

REACH FOR THE SKIES



THE BATTLE OF BRITAIN

Summer 1940. The future of World War II hangs in the balance. The cream of the German Luftwaffe and the aces of the RAF are locking horns in their most crucial confrontation yet – The Battle of Britain.

Over 50 years on, you have the chance to re-live that famous battle and play the part of a British pilot or a German flying ace. Your performance determines whether the outcome is a repeat of the British victory or an unprecedented German success.

Programmed by the team that brought you "Flight Of The Intruder", the definitive 90's flight sim, Reach For The Skies exploits the same unparalleled technology and reaches new heights of historic realism.

- Re-live the crucial days of the battle as controller, pilot or gunner.
- Includes huge array of in-flight options and controls.
- Choose from eight meticulously recreated aeroplanes – Spitfire, Hurricane, Bf 109, Bf 110, Ju 88, He 111 or Do 117.
- Features record and playback modes – watch and re-watch your favourite dogfights.
- PC version includes multiple sound board support, 256 colour VGA graphics and Gaurad shaded aircraft for extra realism.

Available on PC and 100% compatibles, Atari ST and Amiga.



© 1992 Rowan Software © Virgin Games Ltd.
All rights reserved. All trademarks and
O's acknowledged and recognised.

Virgin Games Ltd.
338 Ludbrooke Grove
London W10 5AH



**THE FIRST
COMPUTER CENTRE**

OPEN 7 DAYS A WEEK

OPEN MON - SAT.....9.30AM-5.30PM
SUNDAY OPENING.....11.00AM-3.00PM
THURSDAY NIGHT LATE...9.30AM-7.30PM
OPEN TILL 4PM CHRISTMAS EVE
CLOSED BOXING DAY (MONDAY)

**AUTHORISED DEALERS FOR STAR,
CITIZEN, COMMODORE, ACORN,
ROMBO, ATARI, SUPRA & PRIMA**

FREE DELIVERY!

HOW TO ORDER

Order by telephone quoting your credit card number. If paying by cheque please make payable to **FIRST COMPUTER CENTRE**. In any correspondence please quote a contact phone number and post code. Allow 5 working days for cheque clearance

- All prices include VAT and Standard Delivery
- All hardware/computers are genuine UK spec.
- Free Fast Standard 4 to 7 day Delivery
- Guaranteed 2 to 3 day Delivery only £2.50
- Guaranteed Next Day Delivery only £4.90
- Open seven days a week for your convenience
- Overseas orders welcome

Technical & Sales 6 LINES

24 HOUR MAIL ORDER SERVICE!!

0532 319444

CUSTOMER CARE:

0532 637988

FAX: 0532 319191

**PLEASE ADDRESS ALL
CORRESPONDENCE TO:
DEPT. STR, UNIT 3
ARMLEY PARK COURT
OFF CECIL STREET
STANNINGLEY ROAD
LEEDS, LS12 2AE**

Prices are subject to change
without notice. E&OE.

FIRST COMPUTER CENTRE (LEEDS) Tel: 0532 319444

COMPUTERS

NEW!!

THE ATARI FALCON

32 bit technology for fast processing. Please ring for more details

from £469.99

THE ATARI DISCOVERY PACK

This pack now comes with: Sim City, Final Fight, 9 Lives, First Word word processor, Neochrome, animation package and ST Basic.

now only £229.99!!

**We can also upgrade the
Atari STE Discovery pack:**

- 1 Meg version.....£244.99
- 2 Meg version.....£284.99
- 4 Meg version.....£339.99

THE 1040 FAMILY CURRICULUM PACK

With 1 Meg as standard this pack must be one of the best educational packages. Inc. ST Word, ST Base, Hyperpaint 2, Music Maker 2, First Basic, Micro Maths, French Mistress language tutor, Reading tutor & general knowledge tutor, Mouse & manuals

now only £279.99

NEW!!

NON ATARI COMPUTERS & CONSOLES

COMMODORE

Commodore A500 cartoon classics pack inc 3 games & DPaint3...£294.99
Commodore A600.....£279.99
Commodore A600 Wild Weird & Wicked pack inc Grand Prix, Putty, Pushover & DPaint3...£327.99
Commodore A600HD Epic pack with 20 Mb HD 4 games, D Paint 3, Language Lab & Dictionary.....£459.99
Commodore A600 60 Mb.....£539.99
Commodore A600 80 Mb.....£569.99

ACORN

Acorn Archimedes 3010.....£POA
FULL RANGE OF ARCHIMEDES...£POA
PRIMA IBM COMPATIBLES

PC386-25 Mhz only £687.38
40 Mb HD & VGA monitor
PC386-40 DX 40 Mhz only £766.09
40 Mb HD & VGA monitor
PC486-33 DX 33 Mhz only £1092.74
40 Mb HD, 4 Mb RAM & SVGA monitor

These are just 3 examples of our full range of IBM compatibles. Please ring for more details on this range

CONSOLES

SEGA MASTER SYSTEM.....only £77.99
Inc Olympic Gold cartridge & Alex Kidd
MASTER SYSTEM PLUS.....only £87.99
Inc Rambo 3 game, Alex Kidd & Light gun
SEGA MEGADRIVE 16 bit...only £124.99
inc. Sonic the Hedgehog or Olympic Gold
ADD JUST £15.00 TO INCLUDE
STREETS OF RAGE WITH MEGADRIVE!!
SEGA GAMEGEAR PLUS inc. Sonic The
Hedgehog & Mains Adaptor...only £124.99

The First 10 Games Pack!!

With Chase HQ, Arkonoid, Super Hang On, New Zealand Storey, Operation Wolf, Crazy Cars, Super Cars, Skitz, Switch Blade, and Axels Magic Hammer

only £29.99

or £19.99 with any Atari

JOYSTICKS

Cruiser Black.....£8.99
Cruiser Multi Colour.....£8.99
Zip Stick Triple Fire.....now £12.99
Quick Shot Aviator 5.....£28.99
Quick Shot Maverick 1.....£13.50
Quick Shot Python 1.....£9.50
Quick Shot Flight Grip 1.....£7.99

PRINTERS



**All printers have a full UK warranty. All
printers come complete with printer
drivers (if available) & paper!!**

Star LC20.....£134.99

180 cps draft, 45 cps NLQ, quiet mode and multi fonts, push button operation.

Star LC200 colour...£195.99

9 pin colour, 8 fonts, 225 cps draft, 45 cps NLQ, A4 landscape printing.

Star LC24-20.....£199.99

24 pin quality, 210 cps draft, 60 cps LQ, 16K buffer expandable to 48K, 10 fonts and LCD front display.

Star LC24-200 mono...£219.99

24 pin, 222 cps draft, 67 cps LQ, 10 fonts, A4 landscape. 7k buffer expandable to 39K

Star LC24-200 colour...£269.99

Colour version with 30K buffer expandable to 62K

Star XB24-200 colour....£379.99

Professional quality with On-site maintenance, very quiet.

Star SJ48 Bubble jet.....£209.99

Laser quality, ultra quiet, Epson compatible & portable

Star SJ48 Autosheet feeder.....£49.99

Star Laserjet 4 MK3.....£739.99

4 page laser, 1 years on site maintenance

Panasonic Colour Printers

Panasonic KX-P2180.....£189.99

ultra quiet 9 pin, 192 cps draft, 38 cps NLQ

Panasonic KX-P 2123..£229.99

ultra quiet 24 pin, 192 cps draft, 64 cps LQ, 32 cps SLQ

Wordworth 1.1 only £29.99

with any Panasonic printer

Citizen Printers

Citizen printers have a 2 year guarantee.

Citizen Swift 9 Colour.....£179.99

Excellent value 9 pin colour. Highly recommended

NEW Swift 240 Colour....£279.99

24 pin, 240cps draft, 10 fonts, quiet mode, 240cps.

NEW Swift 200 Colour.....£217.99

Same out put as the 240 but with less facilities

Automatic Sheet feeder....£79.99

Canon BJ10ex.....£219.99

Laser quality output. Larger buffer than the StarSJ48Canon/Star bubblejet cartridges.....£17.99

Canon BJ20.....£309.99

Built in auto sheet feeder and extra facilities than BJ10

Canon BJ300.....£379.99

Desktop bubble jet with laser quality

Canon BJ330.....£519.99

Wide carriage version of the BJ300

BJ10ex Autosheetfeeder...£49.99

Hewlett Packard Printers

HP500 mono.....now £319.99

HP 500 Colour..now £439.99

HP 550 Colour..now £554.99

4 times faster than the HP500C!!

HP500 mono cartridges....£14.99

Double life 500 cartridges....£24.99

All HP printers come with a 3 year warranty

FIRST XMAS PACK

With the **FIRST EXTRAS** Pack you can make sure you have every thing you need when buying an Atari. All the essentials required for the first time buyer and at a bargain price!!

Comprises:

- Top quality microswitched Powerplay Cruiser joystick
- Mouse Mat
- Dust Cover
- 10 high quality Blank Disks
- Plus 3 extra games!!

only £29.99

MONITORS

All our monitors are UK spec.
All monitors come complete
with a free Atari lead.

WARNING: Before you purchase a monitor make sure it has a full UK specification. You might be buying what you think is a similar monitor at a lower price but it is likely to be a "GREY" import. These monitors do not comply with British safety standards and are not covered by an official warranty

PHILIPS CM8833 MK2 stereo colour monitor

Colour stereo monitor. 600*285 line resolution, green screen facility, one years on site maintenance.

**now with Lotus Turbo Esprit
only £219.99 UK Spec**

The Atari 1435 Stereo Colour Monitor

Same tube and resolution as the CM8833 Mk II but restyled, rebadged and colour coded to match your Atari. Includes a built in tilt and swivel stand.

only £209.99 UK Spec

NEW Atari SM 146 with 14" high res screen

High resolution mono monitor. 640 * 400 resolution. Stable image and razor sharp quality. The obvious choice for demanding screen intensive applications

only £129.99 UK Spec

GOLDSTAR REMOTE control TV/monitor

superior to a standard TV set with full remote control

now only £169.99

**SPECIAL OFFERS ON
ACCESSORIES WHEN BOUGHT
WITH A MONITOR!!**

TILT & SWIVEL STANDS.....£11.99

14" MONITOR COVERS.....£5.99

SUPRA MODEMS

The New super fast

Supra-Fax Modem

V.32 bis (14400 baud !!!)

Allows you to send and receive fax messages. This new modem from Supra has full 14400 baud capability. Spec includes V.32bis, V.32, V.22bis, V.22, V.21, MNP4-5, V.42, V.42bis, Class 1 & 2 commands, 9600/14400 Group 3 Fax. Includes free comms software and modem cable

only £259.99!!!

Supra Fax Plus

(up to 9600 BPS)

With the ability to send faxes! and even faster than the standard 2400 from Supra with auto dial and auto receive. 9600 bps Hayes compatible. V.22, V.42 Bis, MNP 5 and auto adjusting facility to maximise transmission speeds. Spec Includes free modem cable and comms software!!

now only £139.99

Supra 2400

Get on line with this incredible value fast modem with auto dial and auto receive. 2400 baud Hayes compatible, V.22 BIS. Includes modem cable and comms software!!

only £79.99

**All Supra Modems come with a
5 year warranty!!**



THE COMPLETE COLOUR SOLUTION BY ROMBO

As official dealers for Rombo, we are now able to offer this excellent package at a great price. The Complete Colour Solution comes with RGB Splitter, Vidi ST, Vidi Chrome and Power supply

now only £119.99

VIDI-ST

High quality digitizing. Inc Vidi chrome colourising software

only £79.99

RGB SPLITTER

Enables you to Colour Digitize in a second. Replaces red green blue filter set. Can be used with all Rombo products

only £54.99

HARD DRIVES

As authorised dealers for PROTAR we can offer these high performance drives at truly realistic prices

These drives are autobooting, high spec, fast access and **VERY QUIET**. The DC range come with a 64k disk cache as standard that can reduce disk accessing time by 50% Standard warranty 1 year, The DC range comes with 2 years

Progate 20.....40ms

only £215.99

Progate 40.....28ms

only £289.99

Progate 50DC...19ms

only £339.99

Progate 80.....28ms

only £419.99

Progate 105DC..16ms

only £469.99

Progate 120DC..16ms

only £589.99

Progate 240DC..15ms

only £919.99

Progate 440DC..15ms

only £1389.99

Progate 500DC..15ms

only £1589.99

BARE HARD DRIVES AVAILABLE FOR UPGRADES.....£POA

EMULATORS

Vortex ATonce 386SX

only £299.99

PC Speed 8Mhz PC/XT

only £95.99

8Mhz AT SPEED

only £149.99

16Mhz AT SPEED

only £224.99

Fitting service available and full repair service on all

Atari Product!!

NEW!!
PRODUCTS

SCANNERS

THE POWER SCANNER

This scanner comes with the latest version 2 software. With bright & sharp grey scale performance & flexible scanned image display manipulation options. Options include Clean up, embolden, resize & flip.

only £94.99

NAKSHA SCANNER

New version of this famous 400 DPI scanner. Includes the highly rated Touch Up software enabling you to alter and manipulate high resolution images. Needs 1 Mb of RAM and runs in mono only.

only £119.99

MICE & TRACKERBALLS

NAKSHA MOUSE with Operation Stealth, mouse mat, holder and 2 year warranty, 290 DPI.

only £24.99

GENIUS Happy mouse

inc mouse mat. Same quality as the Naksha mouse.

only £19.99

GOLDEN IMAGE Brush mouse with Deluxe paint ST

New concept in mice. Held in a similar way to a pen

only £24.99

GOLDEN IMAGE OPTICAL MOUSE

High quality 3 button mouse with full optical mechanism

only £29.99

Zydec Trackball..£29.99

Golden Image Trackball £37.99

DISK DRIVES

Zydec 3.5" External Drive

1 meg external drive, high quality low noise drive.. Inc PSU

only £49.99

SAMPLERS

REPLAY 16 by Microdeal

16 bit sampler. Awarded ST Format Gold award Oct 92.....only £119.99

REPLAY 8.....only £66.99

STEREO MASTER.....£29.99

ROM SHARERS

Upgrade your Atari to TOS 2.06 with this easy to install add-on. Gives you the capability to switch between your old TOS and 2.06

only £64.99

inc TOS 2.06 ROM

FRONTIER RAM EXPANSIONS

where the quality counts

The Deluxe range of RAM expansions by Frontier for the older STFM must be the best available on the Atari. Expandable to 4 Mb by the use of 118/9 SIMMS modules, the 512k expansion is ideal for the user who may need more RAM later on.

STFM Deluxe SIMMS modules

4 Mb unpopulated.....£37.99

4 Mb populated to 512k.....£52.99

4 Mb populated to 2 Mb.....£94.99

4 Mb populated to 4 Mb.....£149.99

Frontier offer a seven day money back guarantee provided the product is still in as new condition. All Frontier products come

First STE RAM expansion

512K.....£14.99

2 Mb.....£55.99

4 Mb.....£111.99

First STE RAM products comes with a full 2 year guarantee

ACCESSORIES

The Zy-Fi Stereo System

This is a powerful speaker system with built in stereo amplifier. It will plug into an Atari STE, Commodore Amiga or Acorn Archimedes. The speakers are optimised with reflex ported cabinets. Complete with its own power supply the Zy-Fi system can also be powered by batteries

only £38.99

THE POWER RIPPER CARTRIDGE

The ultimate cartridge for the Atari ST. Essential tool for programmers and game players alike. gives you the Ability to rip into any Atari program on the market

only £23.99

RAM CHIPS

1 MEG by 8/9 SIMM boards as used in the Atari STE and Frontier Deluxe expansion modules

only £22.99 (per Mb)

FORGET ME CLOCK 2

This is a real time clock that plugs into the cartridge port. Includes a through port and software for setting time and date. All Frontier products carry a full 2 year guarantee

only £17.99

Atari ST Power Supplies

only £39.99

Atari Internal Drives

only £49.99

Monitor Switcher Box (switches between mono & colour monitors, such as SM144 & 8833 MK2).....only £17.99

Mouse/joystick switcher (put joystick and mouse into one port).....only £13.99

Video Scart Switch.....only £19.99

2 way Parallel port sharer box with cable.....only £17.99

Joystick and mouse double extension leads.....£4.99

QUALITY MOUSE MATS.....£3.99

25 CAPACITY DISK BOX.....£2.99

40 CAP LOCKABLE DISK BOX.....£4.99

100 CAP LOCKABLE DISK BOX.....£6.99

90 CAP STACKABLE BANX BOX.....£8.99

150 CAP STACKABLE POSSO.....£16.99

ATARI 520 DUST COVER.....£3.99

PRINTER COVERS.....from £4.99

14" MONITOR DUST COVER.....£6.99

12" MONITOR DUST COVER.....£5.99

ST TO SCART CABLES.....£9.99

STD 1.8 METRE PRINTER STAND..£4.99

MODEM & NULL MODEM CABLES..£9.99

2 WAY Parallel port sharer.....£17.99

DISKS

All our 3.5" disks are **GUARANTEED FOR A LIFETIME** and are **CERTIFIED 100% ERROR FREE** double sided, double density disks are high quality magnetic media and are extensively used by duplicating houses

QTY **3.5" Bulk** OR **TDK/SONY BRANDED**

10.....£4.99.....£5.99

30.....£14.29.....£16.99

50.....£21.99.....£26.99

100.....£39.99.....£52.99

200.....£72.99.....£99.99

500.....£169.99.....£189.99

1000..£339.99.....£POA

TDK Branded disks come complete with labels

Disk Labels.....500...now only £6.99

Disk Labels..1000...now only £9.99

SOFTWARE

WORD PROCESSING & DTP CALLIGRAPHER DTP

NEW!!
LOW PRICE!

Probably the best word publisher on the market for the ST. Includes many features not found in more expensive DTP packages. The Gold version also comes with powerful text manipulation, formula editor and even a grammar checker.

Calligrapher Pro.....only £74.99

Calligrapher Gold.....only £105.99

Protex 4.3

Fast, flexible and reliable, this is the best sub £100 WYSIWYG word processor for the ST. Wide range of printer drivers, columns and box mode and spell check as you type. With mail merge, Help, English dictionary and lightning fast operation, Protex is the one!

only £39.99

PAGESTREAM VERSION 2.2

A powerful DTP package. This is the very latest version which includes 10 compugraphic fonts, spell checker, comprehensive text manipulation and effects and much more.

only £139.99 UK Spec TIMEWORKS 2 PUBLISHER

The successor to the popular Timeworks ST this new version boasts over 40 new significant features.

now only £82.99

First word Plus v3.2.....only £29.99

Thats Write V.2£109.99

Write On word publisher.....£44.99

Protex Version 5.53 W/P.....£109.99

VIDEO AND GRAPHICS

Deluxe Paint ST inc mouse.....£24.99

Flexi Dump Plus.....£31.99

HYPER Draw.....£9.99

HYPER Paint.....£9.99

Spectrum 512.....£9.99

Touch Up scanner software..£27.99

PROGRAMMING

Devpac 3 ST.....£POA

GFA Basic Interpreter V3.5.....£39.99

GFA Basic Compiler V3.5.....£24.99

STOS 3D.....£29.99

STOS Interpreter.....£9.99

STOS Compiler.....£16.99

MUSIC/SOUND

Concerto.....£29.99

Play Back.....£24.99

Prodigy Sequencer.....£49.99

Quartet Sequencer.....£47.99

Replay Pro Digitiser.....£109.99

Replay 8 Digitiser.....£66.99

Replay 16 Digitiser.....£119.99

Sequencer One.....£39.99

Sequencer One Plus.....£119.99

Stereo Master.....£29.99

BUSINESS

Home Accounts 2.....£37.99

K Spread 3.....£59.99

Prodatab Database.....£59.99

SBA Cash.....£69.99

System 3 Accounts.....£39.99

UTILITIES

DIAMOND BACK 2

The ultimate backup utility for the Atari by HiSoft. Essential for users of hard drives. Recently reviewed in ST Format (August) and awarded GOLD status (92%)

only £34.99

Neodesk 3 Desktop.....£34.99

Multi Print.....£9.49

LETHAL WEAPON

TWO COPS - BOTH LETHAL



A multi-level shoot 'em up based on aspects of all three LETHAL WEAPON movies. You can choose to be either one of the two high fire-power cops... each having his individual strengths - and weaknesses! There are many missions to complete including the rescue of a kidnapped girl, the pursuit and arrest of drugs runners, finding and arresting a police murderer, plus many more. You choose the level to

suit your objectives within the game-play.



IT'S MEAN FAST AND... LETHAL!

ATARI ST
AMIGA
IBM PC &
COMPATIBLES

ocean

COMMODORE
CARTRIDGE

LETHAL WEAPON, LETHAL WEAPON 2, and LETHAL WEAPON 3 names, characters and all related indicia are trademarks of Warner Bros. Inc. TM & © 1992 Warner Bros. Inc. All Rights Reserved.

OCEAN SOFTWARE LTD. 2 CASTLE STREET, CASTLEFIELD, MANCHESTER M3 4L7

COVER DISKS

WORKING WITH YOUR COVER DISKS

USING
CYBER PAINT
PAGE 16

The second part of our Cyber series is *Cyber Paint*. There's another game from Dave Munsie and the usual host of useful utilities

We have plenty to suit all tastes this month. The main program is *Cyber Paint*, part two of the Cyber Series. It can be used in conjunction with last month's programs or independently. The final part will be on next month's disks.

On top of that, we've got more clip art for your *Timeworks* documents and there are plenty of useful utilities including a very versatile RAMdisk, and probably the best PD backup utility available anywhere. If all that isn't enough, there are some great exclusive games including *Kid GP*, another brilliant piece of programming from Dave Munsie, and *Plop*, an intriguing puzzle game. There's even a complete replacement desktop.

Those of you who couldn't back up your *Timeworks* disks from Issue seven can now do so using *Fastcopy III*. Please note that this doesn't copy protected software.

COMPRESSED FILES

We are using a new method of compression on our files. As with *Timeworks* last month, the program files are compressed using a special program that reduces the size of the file without altering it significantly.

WHAT TO DO IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS

DON'T PANIC!

In the unlikely event that your cover disk won't load or gives you any other problems at all, remove all cartridges and peripherals and try again. Please note that to restart the computer, you must SWITCH IT OFF for at least five to 10 seconds to clear all traces of resident programs before continuing.

If this doesn't solve your problem, return your disk, with a brief note of the problem and a stamped

addressed envelope to **P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY**. They will test the disk and send a replacement as soon as possible. You can contact the P.C. Wise Helpline with any urgent problems. Please note that they will deal with faulty disks only and not general enquiries. They can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

STEP BY STEP

BACKING UP YOUR DISKS

This guide is based on a single disk system. If you have two floppy disks, place a blank formatted disk in floppy disk B and proceed as shown. For a single disk system, follow the instructions. You will be told when to swap the disks. In both cases, make sure you have a blank formatted disk ready before you begin

1 Format a double sided disk by placing a new disk in the floppy disk drive. Click on floppy drive A and go to the File option at the top of the screen. Click on Format and then click on OK for both of the next two dialogue boxes. Write protect the cover disk (but not the blank disk) so that the disk cannot be written to by the ST, moving the small black notch on the back of the disk so that you can see

through it. This will save mistakes later on. Place the cover disk in the drive.

2 Click on Floppy Disk A to highlight it and hold the left mouse button down.

3 Use the mouse to drag the floppy disk icon towards Floppy Disk B until that is also highlighted. The computer will treat the floppy disk drive sym-



bol as being A for the source drive (the cover disk you are copying) and B for the destination floppy disk drive (the blank disk you are copying to). Don't worry, the ST's not going to expect you to have another disk drive connected.

4 Release the mouse button. You should then be presented with a dialogue box telling you that the computer is



copying disk A to disk B. It will also tell you that all of the info on floppy disk B will be erased. As you have just formatted disk B there is nothing to erase.

5 Click on OK and another dialogue box will appear with the word Copy highlighted. Click on OK again. The computer will read as much as it can from disk A and hold it in memory before it asks you to insert disk B. Swap the cover



disk for your blank formatted disk and then click on OK. You must remember that disk A is always the cover disk and disk B is your blank formatted disk.

6 Swap the disks as requested and you will end up with a copy of the disk on your blank formatted disk.

Make sure that you put the original disk somewhere safe and work with the copy.

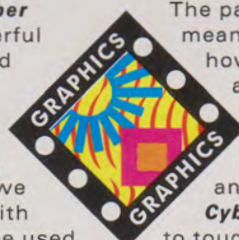
In the unlikely event of anything subsequently going wrong with your coverdisks, you'll have the original to refer to whenever you need it.

ART FOR A

This month's cover disk continues our Cyber Series with Cyber Paint. Use it with last month's Cyber Studio program or on its own – either way, you can expect some superb results. Paul Keller shows you how

Welcome to **Cyber Paint**, a powerful animation and paint program for your ST. This package is the second major program in the Cyber series, which we started last month with **Cyber Studio**. It can be used with or independently of that series. As a standalone paint programme, **Cyber Paint** offers the same kind of features that you'd find on any other commercial paint programme. However, its major strength is its ability to be used as an animation tool.

Animation can be created within **Cyber Paint** and the package is excellent if you want to create 2D cell animation such as cartoons or animated story boards.



The package is by no means limited to that, however – it also offers an extremely varied range of special effects such as resize, distort, move, and superimpose.

Cyber Paint can be used to touch up any 3D pictures that you created with **Cyber Studio**. How about some stars in place of that black background or a wallpapered wall, or maybe a wooden grain look to that table!

This ability to touch up **CAD3D2** frames is just one of **Cyber Paint**'s many assets. You could place a title screen in front of your sequence or add a 2D bitmapped picture created with **Cyber Paint** or any other art package to help create your own movies.

STEP BY STEP



1 Click on the right mouse button for your tools selection screen. Clicking this button again returns you to the work area.



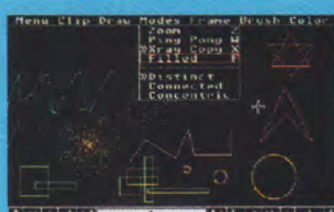
2 From the 'Colour' menu, select the coloured boxes. A white dot centred over a colour box represents the shade currently in use.



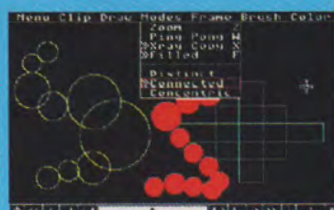
3 Experiment with tools under 'Draw' menu, (except 'Text'). Select assorted colours for each, pressing UNDO to erase any mistakes.



4 To erase your screen picture go to the 'Frame' menu and select 'Clear Pic'. Pressing 'UNDO' will change it back.



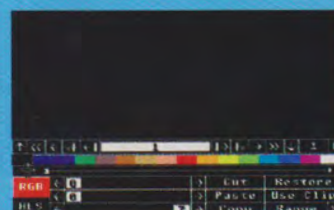
5 From the 'Modes' menu, de-select 'Filled', and repeat steps three and four. Now any filled shapes you draw with, such as boxes, become outlines only.



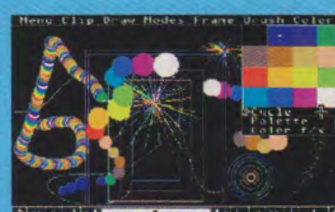
6 Still in the 'Modes' menu select 'Connected' and draw some circles, then choosing 'Concentric' draw some boxes. Re-select 'Distinct' to return to default mode.



7 Select your different brushes from the 'Brush' menu or create your own with 'Get brush'. A red highlight shows your currently selected brush.



8 Choose your 'Palette' selector from the 'Colour' menu. Move the small connected cross and diamond bar, found directly under the 16 colour palette.



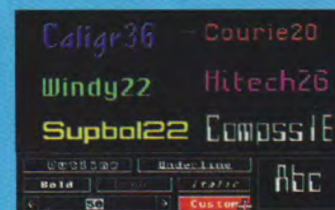
9 Return to the menu selection (right mouse button), choose 'colour' and highlight 'cycle'. Draw with various brush and drawing tools to obtain multi-coloured effects!



10 In the 'Palette' selector, a white dot can be seen over one of your 16 available colours. This colour is the one currently selected. Move the RGB sliders to change this.



11 Use cut and paste with the cycle line, 'copy' for individual colours, 'range' for colours between two values (cross, diamond), 'Restore' cancels changes. 'HLS' is an optional colour selection method.



12 Under 'Menu' click on 'Set Font', and selecting 'Custom' load a font. Set the size of your text with the slider bar (bottom left) and experiment with the various styles available.

RT'S SAKE

Caligr36 Courie20
Windy22 Hitech26
Supbat22 Compass1E
Wow! Wow! Wo!

13 From the 'Draw' menu select 'Text', position 'L' shape with the mouse. Press the left mouse button to enter text and start from position 'L'. Press the right mouse button to finish.



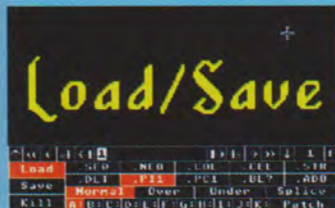
17 Selecting 'Invert', click outside one of the four sides of your block to mirror your image in that direction. Try 'Stretch' and 'Rotate' by dragging the frame edge.



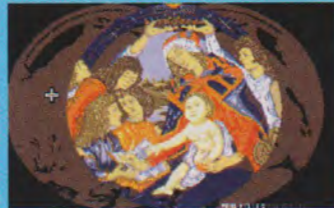
21 Click on 'Menu', and selecting 'Air Speed' change the 'Speed' and 'Spread' with the slider bars. Custom design the size of your brush nozzle and spray speed, selecting 'Airbrush' to use.



25 'Clear pic' and load 'FOREMAN.SEQ' - this loads a sequence file created from CAD3D2. Top right of the 'play-back bar' is the number of frames in the sequence, in this case '12'.



14 Load any picture files you have created from 'Menu'. Choosing 'Load/Save', load any PI? or Neo file by highlighting the file extension and load.



18 'Mask', also found under the 'Clip' menu, can be used to create complex shadow effects. Use with 'Paste Below' for best effect. 'Move' allows positioning of a block without pasting it down.



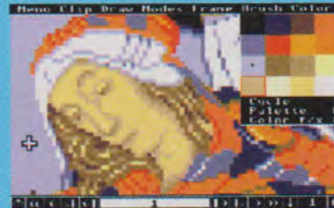
22 'Separate', from the 'Frame' menu, is used for changing one screen colour to another. Choose the new colour from 'Colour' menu and click on 'Separate', then the colour to be changed.



26 Select 'Pixel f/x' from 'Menu' and 'defocus'. Now try the other special effects on the remaining frames by selecting each frame individually, using single frame advance (F6) key, or back (F5).



15 From the 'Modes' menu de-select 'Xray Copy', and from the 'Clip' menu choose 'Cut'. Place the crosshair in one corner of the block you wish to cut and then frame this area.



19 From the 'Modes' menu select 'Zoom'. When presented with a frame, place it around the area you wish to zoom. All the drawing tool functions can be used from within the zoom window.



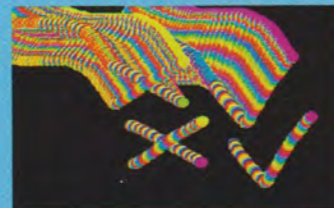
23 ALL the old colour in your picture is changed to the newly selected one. 'Separate Many' uses colours within the colour cycle range, changing them all to your selected colour.



27 Go to 'Menu' and click on 'Status', to show current memory usage. 'Total in Frames' is useful to check that your sequence will fit on one disk, the sequence here being about 63K.



16 The cut block is now saved in a buffer. Selecting 'paste' you can drag this block and place it on the screen by releasing the mouse button. Use with or without 'Xray Copy'.



20 Go to the 'Clip' menu, then 'Clip' tool, select 'Use Clip' from 'Brush' menu. Go to 'Draw' menu and then click on 'Streak'. When you now draw you will be using your clipped brush.



24 Go to the 'Load/Save' menu, load a picture as 'Normal', then load a different picture 'Under' it. The background colour becomes transparent. Test 'Over', and use 'Splice' for 'Seq' merging.



28 Click 'Menu' and 'Kill Seq', 'yes' to clear. For interruption free work tools can be called with a key (shown beside functions).

Cyber Paint uses what is called 'Cel Animation', which is best suited to frame-by-frame work. For 3D animation you will need to have first created the frames from within CAD3D2; the 'Foreman' on these pages is an excellent example. Here the creator has made up the computer man from within CAD3D2 and saved it. The 'SEQ' file can then be loaded into **Cyber Paint**.

Cyber Paint can now act as a special effects studio, into which you can add backgrounds, mix 'SEQ's', and create eye-catching displays.

PLAYBACK BAR

The first step in the tutorial shows you the Playback Bar. Listed below are its icons and the function keys that can be used to access them.

F1 - FIRST FRAME (A)

This goes to the first frame in the Sequence.

F2 - FAST REVERSE (B)

Plays the animation backwards fast.

F3 - REVERSE PLAY (C)

Plays the animation backwards using set time speed.

F4 - CREATE FRAME/ PREVIOUS (D)

Copies current frame, pushing others to the right.

F5 - MOVE FRAME BACKWARDS (E)

Holds down mouse to scroll.

FRAME COUNTER BAR (F)

Shows selected frame.

F6 - MOVE FRAME FORWARD (G)

Holds down mouse to scroll.

F7 - CREATE FRAME NEXT (H)

Places copy after your current frame, pushing the others to the right.

F8 - FORWARD PLAY (I)

Plays the animation forward using set time speed.

F9 - FAST FORWARD (J)

This plays the animation forward fast.

F10 - LAST FRAME (K)

Goes to last frame.

TOTAL FRAMES (L)

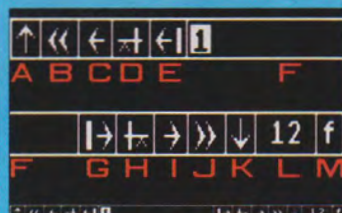
Number of frames in sequence.

FRAME MODE (M)

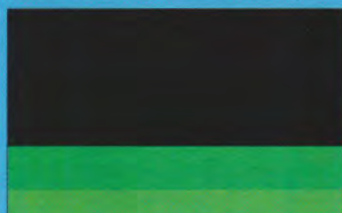
'f' - Single frame.
's' - Segment of frames.
'a' - All frames.

IN THE

STEP BY STEP



1 The Playback Bar. A = F1, B = F2, C = F3, D = F4, E = F5, F = Currently displayed frame, G = F6, H = F7, I = F8, J = F9, K = F10, NO = Number of frames, M = Frame mode.



2 Select 'box' and draw some ground as shown above.



3 Press 'return' to obtain 10 additional screen frames of your currently selected one. Press F10 for last frame (11). Draw a circle (in frame mode 'f').



4 Click on play (F8), stop with the mouse, and push F10. Now, pressing the Delete key, select 'yes' to erase the current frame. Press 'insert' to add one frame.



5 Push F1, then create a picture similar to the one shown above. Press F7 10 times, then F6. Change FRAME MODE to 's' (segment).



6 Go to 'Menu', select 'Time', change the bottom left number to 11 and bottom right number to 21. Exit, and from the 'Frame' menu select 'Delete' and then yes.



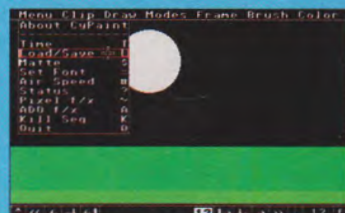
7 From 'Menu' select 'Load/Save' and save as 'grass.seq'. In frame one create another circle (as shown), then from the 'Frame' menu select 'Next blue'.



8 Frame 2 has a traced circle from frame 1. Create more circles as if moving, using each 'Next blue' as a guide for each frame.



9 Erase tracings with 'Unblue Pic', press F8, try 'Ping Pong' from the 'modes' menu. Use 'Bluepic' to blue the screen. 'Scratch' allows movement of frames with the mouse.



10 'Get changes' puts changes in 'clip buffer'. 'Next changes' copies them to next frame. Now select 'Kill seq' and reload 'grass.seq' file, adding two more frames (12 total).



11 Select 'Load/Save' then 'over', load 'FOREMAN.SEQ'. Merge by clicking 'Yes'. The 'FOREMAN.SEQ' frames mix with your background frames. Press F8 to animate. Save sequence.



12 Go to frame 1, select 'Pixel f/x', change frame mode 'f' to 'a', move second number on second line to 12. Select 'Defocus' and ALL the frames will be rendered.

FRAME



Continuing his look at Cyber Paint, Paul Keller explains how to use this month's Cyber Paint program to produce professional looking animation sequences



13 'Kill seq.', reload new 'grass.seq', press F4 then F1, go to 'Frame' menu and 'Clear Pic'. Load text and type something. Click on 'Clip' in 'Clip' menu. Save.



17 Click on 'Full turns', select '1' then 'Size' and 'reduce' to '1'. 'Preview' (to check) and 'Render' (to execute). F8 then F3. Try changing speed by selecting 'Time', and change '4' to '2'.



21 The 'Shift' function is for colour cycling techniques 'FPsh' (Frames Per Shift) and 'Shot' (Shift Over Time). They are used over a range of frames, between the cross and diamond.



25 From the 'Load/Save' menu can be found 'Patch', this is used to cut out segments of your animations 'Start' = begin at frame number, 'Frames' = end at frame number.



14 Go to 'Ado f/x' (Antic Digital Omni-Mover). Select FRAME MODE 'a', stretch diamond to 13 (next to 't'), make full turns = 1, and click on 'Axis' and 'X', then click on preview.



18 'Kill sequence' and load any picture file. Hit 'return' twice. Go to 'Colour' menu, select 'Colour f/x' then frame 10, select frame mode 's' move cross to '10', diamond to '21'.



22 Load the four-frame 'Fish.seq' as 'Normal', select 'Splice' and load as before. This will give you an eight-frame sequence; repeat the above until you have 12.



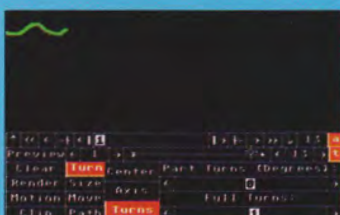
26 For special effects, load 'Cartoon.seq'. Select 'Matte' and load 'Foreman.seq'. Selecting 'Mask' again load 'Cartoon.seq', press F8 to view. 'Matte' only works with 'SEQ' files.



15 Click 'Render', leaving your ST to work. Erase frame one and play the sequence (hit F8). You can't undo a sequence once rendered, so make a sequence copy before you experiment!



19 Next pick 'Fade', select and 'Tint' to '100', click on 'preview' (to check), then select 'Render'. Click on 'yes' and exit, change frame mode to 'f' and press F8 for fade.



23 Save the 'Fish2.seq', press F1 then F4, 'Clear Pic', draw a seaweed in this screen and 'Clip'. Go to 'ADO f/x' and select frame mode 'a', stretch diamond to '13'.



27 As well as sequences from CAD3D2 you can also load in PI1 files saved from within it. Select your favourite CAD3D2 picture angle and touch it up with Cyber Paint.



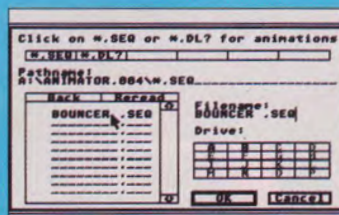
16 'Delete seq.' and load in a picture, press F7, then 'Clear Pic'. Copy the blank frame 20 times ('return' key twice), 'clip' picture frame one and enter 'ADO f/x'. Select FRAME MODE 'a'.



20 Only colours which are enclosed by 'cross' and 'Diamond' (which can be found under the 16 colour bar) are affected. Try 'Red' and some other colours.



24 Select 'Turns', set 'Full Turns' to '1', click on 'Centre' and 'Default', click on 'Axis' and 'X', click 'Path' and then 'Sampled Path', drawing one. 'Preview' and 'Render'.



28 Finally, there is the 'ANIMATOR.004'. This is used to display standalone finished SEQ or DLT files.

One of the best features of Cyber Paint is its ability to import files from last month's CAD 3D2 package.

IMPORT EXPORT



It's now time to import your designer models into **Cyber Paint** and bring them to a shipshape fashion by adding more atmosphere.

To help you do this, we've put together a quick and easy-to-follow step-by-step guide for the transferring of your sequence files from **CAD 3D2** to **Cyber Paint**. As well as being able to load your sequence files from last month's **CAD3D2** program you can also load DLT files created from within **Cyber Mate**.

Select the DLT extension in place of SEQ when following our step-by-step guide for importing sequences.

LOADING AND SAVING FILES

- Always keep some spare formatted disks handy, as you can't format a disk from within **Cyber Paint**.

- As a guide, 24 frames a second helps give smooth looking animation.

- Save each additional animation sequence you create as a different file name - eg Cyber Paint 1, Cyber Paint 2, etc.

- Use the 'Status' box to keep a check on the memory being used for each of your object movements created within a sequence. It is very easy to run out of memory when allocating more frames than your computer can cope with.

- When in **Cyber Paint** save your animations as sequence files. These are more flexible than the DLT formats and take up less memory storage.

- If you wish to save just one frame from your animation, select the PC1 extension, as this will also help save on memory storage space.

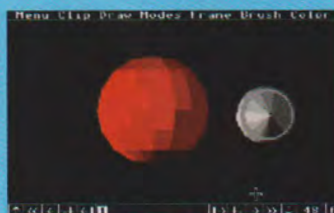
STEP BY STEP



1 When you have loaded Cyber Paint, click on the right mouse button for the tool selection screen. Now, from the 'Menu' section, choose 'Load/Save', or press 'L' on the keyboard.



2 The above file selector box is presented. From this box, check that 'Normal' and 'SEQ' are highlighted, or 'DLT' if you wish to load that file format instead. When you are happy with this, select 'Load'.



3 Having loaded your 'SEQ' or 'DLT' file into Cyber Paint, you can now play with it using the 'Playback bar' or by pressing the function keys. F8 is used to play forwards and F3 to play backwards.



4 Let's add a background to our animation. Pressing F1 for the first frame, then F7 to insert a copy of frame 1. From the 'Frame' menu select 'Clear Pic'. Now draw an appropriate backdrop picture in this frame.



5 From 'Menu' choose 'Time', click on 'To Segment' and make the bottom left-hand side number read '2'. On the same line you should make the right-hand side number the same as your frame total.



6 Select the 'Frame' menu and choose 'Delete', then yes. Now make your background scene contain the same amount of frames as your animation by clicking the 'Insert' key (one copy) or 'Return' (10 copies).



7 Pressing the F1 key for first frame and saving your background as 'backgrnd.seq', proceed to merge your original CAD3D2 animation by selecting 'Overlay' and 'Load' your original file over this.



8 The new animation created can be saved as a sequence file, but when saving call it a different name from your original CAD3D2 sequence in case you need to make more changes later.

GET READY 4 THE INVASION

PLAY THE GAME FOR...

COMIC RELIEF HAVE AT LAST GRASPED THE FACT THAT ALL THE PEOPLE WORTH COMMUNICATING WITH THESE DAYS BUY COMPUTER GAMES - AND IT'S A REVELATION WHICH THEY HOPE IS GOING TO MAKE THEM A BLOOMING FORTUNE TO PLOUGH INTO BRILLIANT PROJECTS IN AFRICA AND THE UK.

COMIC RELIEF

SLEEPWALKER



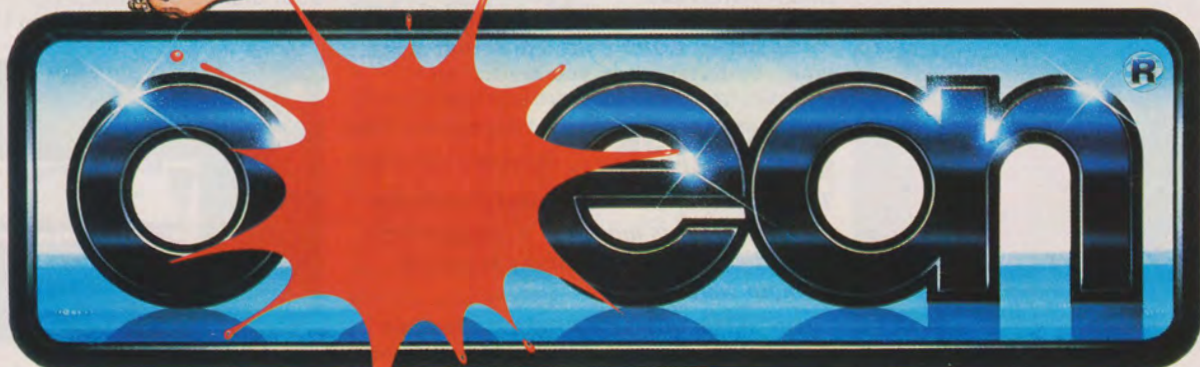
HERE ARE SOME IDEAS ON HOW YOU CAN GET ONTO THE SLEEPWALKER SPONSORSHIP TRAIL:

1 BUY SLEEPWALKER - A DECISION YOU WILL NEVER REGRET - THE GAME IS VOICED BY LENNY HENRY, AND WORKED ON BY SOME OF BRITAIN'S FINEST COMIC MINDS (and a couple of gits who happened to be round that evening). FOR EVERY GAME BOUGHT

£4.32 GOES TO COMIC RELIEF

1 TAKE PART IN THE GREAT SLEEPWALKER CHALLENGE, WHICH WILL BE INVADING ALL THE BIG RETAIL CHAINS DURING THE WEEKS BEFORE RED NOSE DAY - MARCH 12th 1993.

1 ORGANISE YOUR OWN SPONSORSHIP CHALLENGES LIKE: BEATING YOUR HIGHEST SCORE - TAKE ON YOUR DAD, OR YOUR TEACHER, OR EVEN YOUR SCHOOL IN A SLEEPWALKER CONTEST. DREAM UP YOUR OWN HIDEOUS CHALLENGE TO HAPRANGUE YOUR FRIENDS.



OCEAN SOFTWARE LIMITED · 2 CASTLE STREET · CASTLEFIELD · MANCHESTER · M3 4LZ
TELEPHONE: 061 832 6633 · FAX: 061 834 0650

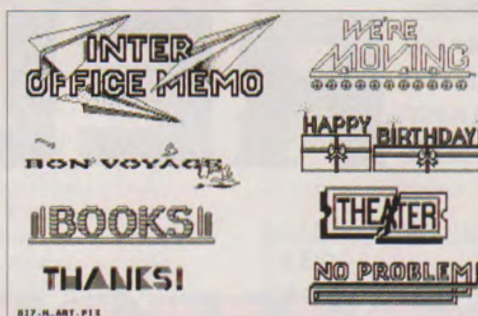
As well as Cyber Paint, we have another great exclusive game from Dave Munsie on our cover disks this month. Add to that a host of games and utilities and you've got the best value-for-money cover disks anywhere

ON DISK

MORE TIMEWORKS CLIP ART

**MORECLIP.ART AND XMASCLIP.ART
FOLDERS • USE WITH TIMEWORKS •
DISKS 1 & 2**

We're in seasonal mood with our clip art folders this month



This folder contains a collection of headings for your DTP documents.

We've got eight more pages of clip art for you to use with **Timeworks** this month. These are .PI2 files so they are medium resolution Degas pages. There are some classy pictures to enhance whatever you're creating, together with some special Christmas drawings.

For instructions on how to use these pictures within **Timeworks**, see issue eight, pages 106 to 109.

ACCESSORY

**ACC.PR.G • AUTO FOLDER UTILITY •
DISK 1**

The first of three utilities on disk one is a small accessory loader that tidies up your boot disk

In a folder called 3_UTILS on disk one, you'll find a very small (768 bytes) program called ACC.PR.G. This is a great way to tidy up your bootup disk by allowing you to put all of your accessories into a folder called ACCS instead of having them in the root directory of your disk. This is an ideal utility for hard disk owners, but floppy disk users will find it handy too.

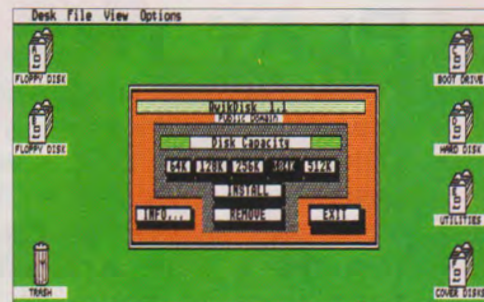
The program is used by placing it in a folder called AUTO on the disk that is in your computer when you switch on.

QWIK DISK

RAMDISK.ACC • ACCESSORY • DISK 1

The second of the trio of useful utilities on disk one this month is a configurable RAMdisk that can be easily removed without rebooting

The problem with RAMdisks is that you need to reboot the computer to get rid of them when you require the extra memory. This accessory will allow you to



Set the size of your RAMdisk and install it. Use this to remove it too.

create a RAMdisk and remove it without having the problem of resetting.

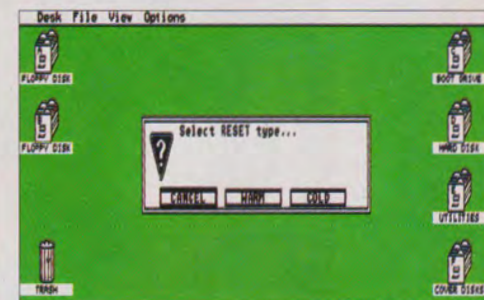
Simply copy the file RAMDISK.ACC to the root directory of your boot disk and reset the computer. Drop the Desk menu and you will find a program entitled **QwikDisk**. Click on this and a dialogue box will appear offering a range of sizes from 64k to 512k. Simply select the size of RAMdisk you require and click on install. Using the options menu, create a disk drive called drive M and it will have all the characteristics of a fast disk drive. To remove the RAMdisk, just click on Remove. Don't forget that any programs you run may need the memory taken up by the RAMdisk, especially on smaller systems, so remember to remove it before trying to run anything.

RESET

RESET.ACC • ACCESSORY • DISK 1

The third in our trio of utilities in the 3_UTILS folder is a simple resetting facility

Just 704 bytes make up this simple utility that is especially useful to TOS 1 owners. By selecting this from the Desk menu, the option to reset the computer is presented. You can choose between a warm reset, which will just restart the system without clearing all of the memory, or a cold reset that resets all of the pointers to zero and gives you a completely fresh start. Place the file RESET.ACC in the root directory of your boot disk to use this program.



Select a warm or a cold boot from within the RESET accessory.

THIS MONTH

CYBER ST

ST.3D2 • FILE FOR CAD3D • DISK 2

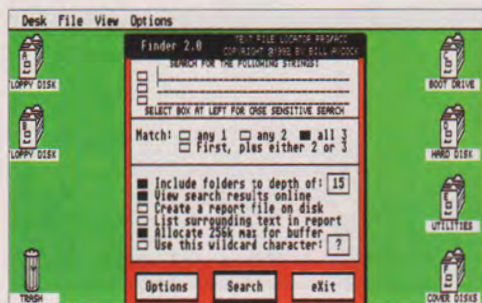
A complete CAD picture of an ST for CAD 3D

Load up **CAD3D** from last month's cover disk and load in this file. Wonder at the workmanship of a complete ST created for you to show you what can be done with the package.

FINDER

FINDER 2.0 • DESK ACCESSORY • DISK 2

Can't remember what you called that file? Looking for a particular file in several folders or on several disks? Finder will help you



Up to three strings and various options to search on in Finder.

To use this handy desk accessory, simply place the program **FINDER.ACC** in the root directory of your boot disk and call it up from the Desk menu whenever required. You have a range of search criteria which will help to narrow down the search specifications.

You can select dates, file sizes and up to three search strings along with a combination of other details. An extensive manual is provided on the disk to help you get to grips with Finder.

HANDS ON MIDI

MAGROCK MIDI • MIDI MUSIC FILE • REQUIRES MIDI PROGRAM TO RUN • DISK 2

Another MIDI music file for your sequencer

Continuing in our bid to bring you the latest and the very best in cover disk programs and MIDI coverage, we've got an original piece of music for all you MIDI fans.

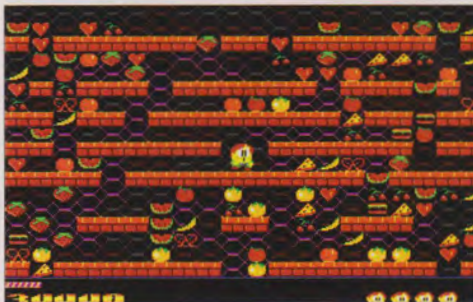
Hands On MIDI Software of Cosham has produced this piece to show you how to program your sequencer for maximum effect.

To run it, simply load the file into your sequencer and hit play. Put on those dark glasses, black suits and hats and enjoy the music!

KID GP

KID GP • EXCLUSIVE GAME BY DAVE MUNSIE • LOW RESOLUTION • DISK 2

This platform game will challenge your playing skills



Collect all the fruits on this level of Kid GP.



Mind the step! Another level could be more challenging.

Kid GP gives you 15 levels of fun to keep you occupied as you chase around the screen collecting diamonds. Various nasties will get in your way, though, so watch out for objects to help you. There are hammers that knock the beasts down to size and mushrooms that will speed you up or make you invisible to them.

The game is joystick controlled and there are three game speeds available by pressing F1 to F3. Have fun!

Copy the complete folder to a blank formatted disk and switch to low resolution. The game is then run by double-clicking on the **KID_GP.TOS** file found in the folder.

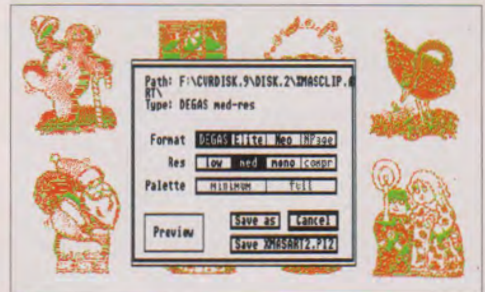
PICSWITCH

PICSWITCH 0.7 • PICTURE UTILITY • DISK 2

This handy utility enables you to view and change picture formats for use with any package

Picswitch will allow you to view various format pictures and convert them from one to another. It will also let you change the resolution of the picture should you need to.

To use the program, simply run it and you will be presented with the file selector. Select the picture that you want to view and it will be displayed on the



The Save screen from **Picswitch** gives you the different formats and all three resolutions.

screen. Press the Help key and all of the functions will appear in a dialogue box.

To save the picture in another format, simply press the S key and a box will appear giving you the options available to you. The ability to convert from one resolution to another is particularly useful for clip art so you can use it in whatever resolution you are working in.

PLOP!

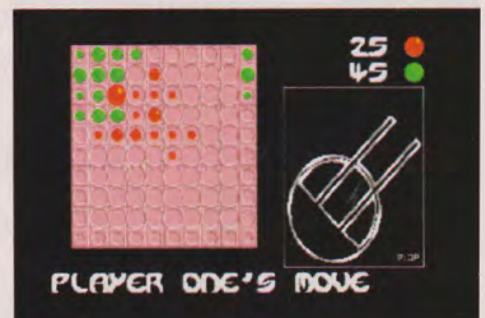
PLOP • EXCLUSIVE GAME BY S.M. HALL • DISK 2

A great game to play and a novella to read too. How's that for value?

Debbypharq (the Third) has lost his staff in a rather foolish bet. He failed in his attempt to beat Madame Champigfarm, the local **Plop** champion. Read all about this in the novella on the disk.

The game board consists of a grid. Within this grid you play the game by placing your marker on a square. Each square expands with further clicking and will eventually 'plop', adding some of its contents to surrounding squares. This continues in turn until there is only one colour left on the grid. The owner of that colour is the winner. You can play one of four different computer opponents or another human player.

You can change the shape of the blobs from balls to diamonds and even change the colours. Choose between normal play (practice) and tournament. Clicking with the right mouse button brings up an options menu that allows you to save



Prepare yourself for **Plop!** An addictive game with great graphics.

1ST TRACK FOR 24 TRACK

**SAVE
£10!**

All of you who made the most of the 1st Track demo on issue 5 can now buy the full product at a special price!

Gerdes 1st Track is a powerful 24 track sequencer as featured on the cover disk of issue 5. It includes an event editor and a multi toolbox allowing a range of operations. It's also fully MIDIfile compatible and can record sys-ex data and can be synchronised via MIDI clock.

Please send me a complete copy of 1st Track at the special ST Review reader all-inclusive price of £19.50 (rrp £29.50) for the program and three MIDIfiles sequences from the Gerdes MIDI Music Collection.

Name:
Address:
.....
Daytime Phone:

Please send your cheque/PO, made payable to Newtronic Ltd, to:
Newtronic Sound Design and MIDI Software Ltd, 62b, Manor Avenue, London SE4 1TE and allow up to 28 days for delivery.
Visa/Access orders on 081 691 1087

**1 MEG
ONLY!**

CYBER PAINT OFFER

Reap the full benefit of Cyber Paint by getting the complete and comprehensive user manual and original disks!

**ONLY
£24**

Please send me a complete copy of Cyber Paint for £24 (fully inclusive of VAT and P&P)

Name:
Address:
.....
Daytime Phone:
Visa/Access No.
Expires:
Signature:

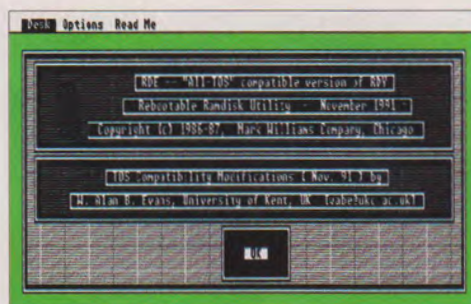
Please send your cheque or postal order, made payable to GST software Products, to: **Softline, GST Software Products, Meadow Lane, St Ives, Cambs, PE17 4LG** and allow up to 28 days for delivery.

or load a game, restart, return to the game, change sprites or players or quit. Complex, isn't it? For full details, there is a text file following the story on disk.

PROGRAMMABLE RAMDISK

RDE • UTILITY PROGRAM • DISK 2

An advanced RAMdisk with some very useful features



Title screen for RDE, the configurable RAMdisk that can be saved as well.

RDE is a programmable RAMdisk that will allow you to create various different RAMdisks and save them on a disk for use whenever they are needed. A simple menu system makes this program easy to use and configure to your own individual requirements.

You can save all of the details of a RAMdisk including its contents and recall it simply by selecting the option to load it from the menu within the program. You can also easily remove it by reversing the procedure.

Follow the instructions on the screen using the drop-down menus that appear. There is a help option within the program as well as a full read me file which is supplied on the disk.

TERADESK

TERADESK • REPLACEMENT DESKTOP PROGRAM • DISK 2

Fed up with the GEM desktop? Want some more features? Don't want to spend out on Neodesk or a TOS 2.06 upgrade? Then this is the program for you...

Teradesk is a complete replacement desktop and contains a lot of the features that you wish Atari had built in to its own version.

Create a folder on your boot disk called



An impressive alternative desktop with many desirable features. Teradesk is an ideal replacement for GEM.

Desktop and copy the files into it. The program can then be run by double clicking on DESKTOP.PRG. You can also make it run automatically using the Install Applications option on TOS 1.04 or higher, or using Startgem or Headstart on earlier versions.

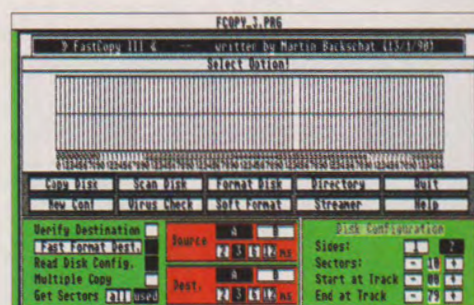
Teradesk takes up about 120K of disk space, so don't use it when you need memory to run other programs. 520 users may find it useful for file handling and general system management, but a program like this really comes into its own if you have plenty of memory and a hard disk drive available.

A manual for this program is supplied on disk - you are advised to read it before you start.

FASTCOPY 3

FASTCOPY 3 • FILE BACKUP UTILITY • DISK 2

In a folder called TWKS_BAK you will find a program called FCOPY_3.PRG, a utility which will back up your Timeworks disks and help with disk management



A visual display shows you exactly what Fastcopy 3 is doing.

Copying files takes time and a lot of disk swapping, as you're probably well aware. We gave you **Timeworks** on the November cover disk, which you couldn't back up in the normal way because we used an extended format to get all of the information on it!

If you've been struggling with it, the answer to all your problems is contained in this backup utility. The best PD backup program that you'll get anywhere is **FASTCOPY 3**.

The program can be run as it is or, by renaming it FCOPY_3.ACC and placing it in your root directory of your boot drive and resetting, as an accessory.

To copy a disk, simply click on Copy Disk. The program will then read the disk configuration and adjust itself accordingly. Then all you need to do is swap disks when prompted. You don't even need to format the new disk - talk about making life easy for you!

The program will also check for viruses, format a disk and 'soft format' a disk. This latter option is very quick to carry out. Instead of formatting the whole disk, the program just writes the information that tells the computer that the disk is blank and writes over whatever is there when necessary.

● Please note that this program will not copy commercial software, so all you budding pirates out there had better think again!

**Tonight you could
become a Railroad Tycoon, shape a Civilization or
indulge in a little Piracy in the Caribbean**



Alternatively, you could grab an early night

With such voyages of fantasy at your fingertips, there's no reason to have a 'quiet night in' ever again. Devised by the guru of games design, Sid Meier, each adventure involves strategic role playing to stretch your imagination and sharpen your wits.

So you could be playing with the train set you always wanted,

surviving and thriving in the company of Genghis Khan or navigating a galleon around the Spanish main.

Are you really prepared to settle for anything less?

MICRO PROSE™
SIMULATION • SOFTWARE
Seriously Fun Software

**Railroad Tycoon, Civilization, Pirates! -
all Classic games from Europe's Number One Software Publisher**

MicroProse Ltd. Unit 1 Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. UK. Tel: 0666 504 326

Ladbroke Computing



33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP

Ladbroke Computing International are one of the longest established home computer dealers in the UK. We have developed an extensive customer service policy which involves testing of all Hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

All prices are correct at copy date 16/11/92 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery.

How to Pay

You can order by mail Cheques/Postal orders made payable to Ladbroke Computing. Or give your credit card details over the phone.

Delivery

Postal delivery is available on small items under £40 (Normally £3, phone for details). Add £5 for courier delivery. Next working day delivery on Mainland UK subject to stock (£11 for Saturday delivery). Open Mon-Sat 9.30am to 5.00pm. Ladbroke Computing Ltd Trading As Ladbroke Computing International.

Fax: (0772) 561071

Tel: 9 am - 5:30 pm (5 Lines)

(0772)203166

DataPulse

Hard Drives

- All Data-Pulse Plus Drives are formatted, partitioned and tested before despatch.
- Autoboosting and Autoparking. Extremely low noise.
- DMA device selector & On/Off switch on front of case, DMA Out port.
- Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand.
- We only use quality ICD controllers with clock.
- All drives include 12 months warranty & free expert support.

Data-Pulse + 52Mb	£ 319.99
Data-Pulse + 127Mb	£ 429.99
Data-Pulse + 213Mb	£ 539.99

Floptical Drives

- Stores over 20Mb of data on a 3.5" Floptical disk. Reads/Writes 720K and 1.44Mb 3.5" disks.
- Average access time 65ms. Data transfer rate 200K per second (6 times faster than Floppy disk).
- Available as a stand alone unit, an upgrade to Data-Pulse(Plus) or as a combination unit with Hard drives. 21Mb Floptical diskette included with every drive.

21Mb Floptical Drive	£ 399.99
Datapulse upgrade	£ 299.99
21Mb 3.5" Floptical Disk	£ 24.99

Discovery Packs

- Includes Windowing GEM Operating system, Stereo sound output.
- Includes Mouse and built in modulator to connect to TV.
- 4 Great games: 9 lives, Escape from the planet of the robot monsters, Final fight, Sim City.
- 1st Word wordprocessor, Neochrome Art & Ani ST.
- Basic Language and Tutorial software.

520 STE	£ 219
1Mb STE	£ 229
2Mb STE	£ 275
4Mb STE	£ 330

Curriculum Packs

- Educational software catering for 5yrs to GCSE level.
- Business pack consisting of Wordprocessor, Spreadsheet and Database.
- Creativity pack including Hyperpaint and Music maker software.

1040 STE	£ 250
2Mb 1040STE	£ 310
4Mb 1040STE	£ 370

Above Curriculum packs are special offers while stocks last.

1040 Midi Master Pack	£ 289
-----------------------	-------

Printers

Star

Star LC100 Colour	£ 165
Star LC20	£ 124
Star LC24/100	£ 179
Star LC24/200 colour	£ 259

All Star Dot Matrix printers include 12 months on site warranty.

Starjet SJ48 Bubblejet	£ 210
SJ48 Sheetfeeder	£ 69

Citizen

Citizen 120D+	£ 119
Citizen Swift 240 Colour	£ 270

Hewlett Packard

HP Deskjet 500	£ 339
HP Deskjet 500 Colour	£ 449
HP Deskjet 550 Colour	£ 580

Triumph Adler

JPR7825 Bubblejet	£ 224
-------------------	-------

Lasers

Seikosha OP104	£ 549
Seikosha 1Mb RAM	£ 69
Seikosha Toner (2 units)	£ 19
Seikosha Drum Unit	£ 79
Ricoh LP1200	£ 759

Add £3 for Centronics cable and £5 for next working day courier delivery.

Monitors

Atari SC1435	£ 174.99
--------------	----------

The SC1435 comes complete with cable and tilt/swivel stand.

Philips 8833MKII	£ 189.99
------------------	----------

Includes 12 months on site warranty and free Lotus Turbo challenge II.

Philips 15" FST Tv	£ 219.99
Philips 15" Cube Teletext	£ 259.99

- SCART input Tv
- Fasttext teletext

8833 MKII-Amiga cable	£ 9.99
Philips SCART to Amiga	£ 9.99

ST Networks

Datanet Network Hardware

- Cartridge based high speed network solution.
- Compatible with ST(F)(M), Mega ST, STE, Mega STE.
- Connects via Coax and BNC connectors.

Powernet Network Software

- MultiTasking Network software allows applications to run on the server while drive and printer accesses take place in the background.
- Allows the mixing of Network types. ie DataNet, LanNet and MidiNet devices.
- Full Falcon compatibility using LanNet device.
- Ethernet compatibility and E-Mail coming soon.

DataNet with PowerNet	£ 99.99
-----------------------	---------

LanNet with PowerNet	£ 89.99
----------------------	---------

MidiNet with PowerNet	£ 59.99
-----------------------	---------

Aries Upgrades

- Will fit any ST(F)(M) or Mega ST. Solder in design for higher reliability.
- Extremely compact in house designed Multi-Layer circuit board, smaller than a credit card. Upgradeable in stages from the base 512K to 2Mb then 4Mb.
- All Aries RAM upgrade boards come packaged in a 10 capacity disk box, complete with full fitting instructions and memory test software.

512K Board	£ 39.99
2Mb Board	£ 79.99
4Mb Board	£ 129.99
512K SIMM's STE	£ 7.99
2Mb SIMM's STE	£ 57.99
4Mb SIMM's	£ 109.99
2xSIPP to SIMM adaptors	£ 3.00

Repair Services

Our Service department can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

Please note: The minimum charge covers labour, any extra parts are chargeable.

Quotation	£ 15.00
Minimum repair charge	£ 35.25
Same day service	£ 15.00
STFM(E) PSU	£ 39.99
1Mb Internal drive	£ 39.99
TOS 2.06 + Switch STFM	£ 65.00
TOS 2.06 + Switch STE	£ 65.00
Courier Pickup	£ 11.00
Courier return	£ 6.00

GI Brush Mouse

"The Natural way to draw"

- 150Dpi resolution.
- Opto/Mechanical mechanism.
- 500mm/SEC tracking speed.
- Switchable between ST/Amiga.
- Direct Mouse replacement.
- Includes the exceptional DELUXE PAINT ST art package with full manual.

GI Brush + Dpaint ST	£ 24.99
----------------------	---------

GI Brush Mouse	£ 19.99
----------------	---------

Mice

Golden Image Mouse	£ 14.99
--------------------	---------

The Golden Image Mouse was recently given an Amiga Format Gold Award with 90% and offers 290 Dpi resolution, 2 high quality microswitched buttons and a free mouse mat.

Optical Mouse	£ 24.99
---------------	---------

The Golden Image Optical Mouse is a high quality, 3 button, replacement mouse. The fully Optical mechanism means no moving parts offering far higher reliability. Includes Mat.

Jin Mouse	£ 7.99
-----------	--------

Don't be deceived by the low price of this mouse. Mass production of the Jin mouse has resulted in a high quality Opto/Mechanical mouse featuring 290 Dpi resolution.

Ladbroke's Mouse mat	£ 2.98
----------------------	--------

Please add £2 for P&P on mice.

Floppy Drives

- 720K formatted capacity.
- Double sided, Double density.
- Daisy Chain Through port for compatibility with older ST(M) machines.
- External Power Supply.
- Attractive case design.

GI External drive	£ 54.99
-------------------	---------

ST Internal drive	£ 39.99
-------------------	---------

Hand Scanners

- 100,200,300,400 Dpi resolutions.
- 1 letter mode, 3 photo modes.
- 105mm scanning head.
- Includes the excellent MIGRAPH TOUCH UP 1.8. This is the full package with manual.
- Includes DELUXE PAINT ST, full package with animation and manual. One of the best available art packages for the ST.

- MIGRAPH's OCR Package available as an Upgrade to all Golden Image Scanner Owners.

Golden Image Scanner	£ 119.99
----------------------	----------

Silhouette

- Autotraces bit image graphics to resolution independant vector graphics.
- Produces Beziers, B-Splines, High resolution grey scales.
- Imports IMG, DEGAS, TINY, MacPaint, GEM, SGF files.
- Exports IMG, GEM(1.3), SGF, DXF, EPS(Postscript) files.
- Requires 1Mb ST, Hi-res monitor.

Silhouette	£ 60
------------	------

Calamus CVG support coming soon.

What's New?

Exciting and new products from the company that gave you The BEST Add-On of the Year.

Accelerators

If you're in to Desk Top Publishing, you know the need for speed! The **TURBO 25** is the very best accelerator available today, based on a 68000 processor running at a blinding speed of 25 MHz. Close to TT speed, maintains 100% compatibility.

NEW! Plus Cache ST. A budget 16MHz 68000 Accelerator for the ST(FM) and STe.

Special introductory price: £99.95

Available Soon - TINY TURBO - 030/40MHz
6-8 times TT speed!! For All ST computers.

NVDI

Accelerate your screen, too! **NVDI** optimises TOS Display routines using Assembler Code. Up to 10x faster!! Includes a very fast replacement GDOS system which can be switched off. 1000's of copies have sold in Germany. Indispensable for DTP, Graphics and Animation programs. **New Price 49.95**
... It'll make you wonder how you ever used your ST without it' (ST User Aug 1992)

Crazy Dots

The Colour Graphics Card for the TT/Mega STe. Select resolutions from 640x200 to 1664x1200. Use 256 colours from a 16 million colour palette. Essential for Colour DTP. **New Price £449.00**

NEW! High Colour Option (32768 colours)

NEW! NVDI for Crazy Dots.

MODEMS and FAX Software

The **TKR2400** supports speeds up to 2400bps. The **TKR14400** will go up to a lightning speed of 14400 bps. Data compression and error correction modes MNP5, Lap-M, V.32bis and V.42bis are standard. Both are Group 3 compatible Fax Modems, and of course are Hayes compatible. They support the UK split rate 75/1200 bps.

TeleOffice, is the best Fax Software for the Atari available today. Used as a Desk Accessory, **TeleOffice** allows sending of faxes from within wordprocessors and DTP software. Also sold separately. **Xmas Special: TeleOffice and TKR2400 £199.95 or TKR14400 £299.95**

High Density Floppy Drives

Yes, you too can use those IBM 1.44Mb floppy disks with our **EiCo High density module** and drive kit. The kit comes with fitting instructions, software (HD formatter) and high quality 1.44 megabyte floppy disk drive. It is fully compatible with your old double density disks. Works with PC Emulators. A perfect replacement for those troublesome single-sided A drives! **Special Offer £89.95**
The module is also available separately.

CartMaster

NEW! The Multi-Cartridge Control System manages up to four devices including Spectre GCR and a huge range of 'Dongles' using software switching. **CartMaster** is compatible with all known cartridge port devices for the Atari ST and TT.

Special Introductory Offer: £99.95

NameNet

NEW! Have you tried using a Database and got utterly frustrated trying to set it up? **NameNet** is for you. No setting up required! Just load the program to start entering your addresses. Prints labels and filofax pages, perfectly. Use the mouse or keyboard shortcuts. It can dial for you using your modem. It is even compatible with Mercury. Convert telephone numbers - just type 'Bristol' to get 0272. **NameNet** is easy, super fast, and you don't need a hard disk. Its global lookup facility is so fast that we have replaced our old Database program with **NameNet**. A brilliant feature-packed easy-to-use program for **Only £49.95**

Hard Disks

Quality 40Mb-2Gb SCSI Hard Drives from **£299.00** carefully assembled into beautiful UK made cases.

Hard disk system repairs and upgrades.

20Megabyte Floptical Drives from **£399.00**

This month's Special:

128Mb Magneto Optical Hard Drive **Only £999.95**

Also available are Hard Drive Kits, Syquest Drives, 650Mb & 960Mb Optical and WORM Drives. Fully compatible and ready for the Falcon.

CodeHead Software

And here is another amazing offer: MultiDesk Deluxe **£29.95**. HotWire, MaxiFile III, CodeKeys, G+Plus, Warp 9, LookIt! PopIt! and MidiMax

Only £24.95 each, or £39.95 for Two

if purchased with any other product in this Advertisement.

Tower Power

Is your computer taking over your work-space? Transform your computer into a professional tower system. Fit all those extras into a tower with lots of space for floppy and hard drives. Gain the advantage of a separate keyboard on the ST and Falcon. Ask for the new leaflet. For DIY installation: no soldering required. Or ask for our professional fitting service. Ready-to-use assembled Towers with or without hard disks available. Keyboard kits also sold separately.

Prices: Mega St/Ste & TT **£169.95**
ST(FM/e) includes keyboard kit **£199.95**

Special Limited Edition ST(FM/e) Tower
Unrepeatable Offer £179.95 Save £20.00

TOS 2.06 Operating System

NEW! We supply only the Official Atari UK TOS 2.06 upgrade with manual. A Switch Board allows you to keep your old TOS.

Price £69.95

Xmas Offer: Fitted by Experts for Only £10.00

Keyboard Improvements

The 'Key-Clicks' replacement kit is one of our most popular products, giving the Atari keyboard a firmer, more positive feel. You'll be amazed at the difference. For ST(FM), STe & Falcon. Easy DIY fitting. Get the professional feel for **Only £29.95**
Do you ever hit two keys at once? Our replacement Key Top Set is spaced correctly. **Only £29.95**
Special key top set available for PC emulator user.

Xmas Offer: Buy Key Clicks and Key Tops together for Only £44.95

Autoswitch Overscan

Fill those borders. Gain up to **60%** extra screen in colour modes and up to **40%** in HiRes (752*480max). Excellent for multisync monitors. Automatically switches to 'standard' resolutions when loading incompatible programs. For ST/STe/STFM and MegaST computer ONLY!

Xmas Offer: Only £39.95!! Save £10.00

AutoSwitch OverScan TT

NEW! ATARI said it was not possible. But the OverScan team has done it again! **61%** extra usable area in ST resolutions! **34%** in TT low and medium resolution! The 640*400 pixels of ST high expand to an unbelievable usable area of 832*496 pixels. Essential for DTP and Spreadsheets.

TT Fast Ram

Two boards to choose from. Both can be populated in stages up to 32 or 64 Megabytes. This board will speed up Calamus SL and Pagestream significantly. We can upgrade to 256Mbytes!

ST memory upgrades

Out of memory? Phone for a quote. You'll find we are competitive without compromising on quality. **NEW** is our 'while you wait' fitting service. Please phone to book your appointment.
Tried a DIY Memory Upgrade and failed? We are happy to help put things right.

Other Products

BioData EtherNet, ICD, Multisync & Big Monitors, EOS, DTP... and more. Too many to list. Our new catalogue and pricelist is only a phonecall away.

We would like to take this opportunity to thank you for your support and wish you all a Merry Xmas and a Happy New Year.

Mail Order & Windsor Service Centre 0753-832212 Showroom & London Service Centre 081-693 1919

ATARI WORKSHOP

Do you realize we operate fully equipped workshops at both addresses? Professional service and customer satisfaction are the essence of our service. We are happy to collect and deliver items for repair. Whilst we make a small charge for diagnostic only, there is a no-fix, no-charge policy. Our high standard of workmanship has been endorsed by Atari UK.

System Solutions

Mail Order & Windsor Service Centre: Windsor Business Centre, Vansittart Estate, off Duke Street, Windsor SL4 1SE. Fax 0753-830344.
Showroom & London Service Centre: The Desktop Centre, 17-19 Blackwater Street, East Dulwich, London SE22 8RS. Fax 081-693 6936.

The Atari Workshop & System Solutions are Trade Names of Brandt Fernandes (Europe) Limited

there's only one good enough to be called...



PREMIER MANAGER



Available from your local stockist or direct from
Gremlin Graphics Software Ltd.

Depending on the success or failure of your management skills, your team will either find itself leaping up the Divisions on route to the top or languishing with the Part Timers!

- ⚽ One to four player option ⚽ Match highlights with six game speeds ⚽ Manager & club histories
- ⚽ Complete results service ⚽ Weekly fax data on match reports transfer news & player information ⚽ 5 full divisions
- ⚽ Cup competitions ⚽ Comprehensive transfer market ⚽ Complete interaction with other team managers ⚽ Full player training with up to five dedicated coaching staff.

The most comprehensive and sophisticated football strategy game ever.

"Convincingly boots other football management games into touch"
(Amiga Action 90%)



Gremlin Graphics Software Ltd., Carver House, 2-4 Carver Street, Sheffield S1 4ES. © 1992 Gremlin Graphics Software Ltd. Tel: 0742 752422

Screen shots from Amiga Format.

NEXT MONTH

THE THIRD AND FINAL PART OF THE CYBER ANIMATION AND GRAPHICS SERIES – CYBER CONTROL!!

DID YOU COLLECT THE WHOLE SERIES?

CYBER STUDIO – ISSUE 8 DECEMBER

A fully blown 3D design package worth almost £50, this is the ideal starter program for anyone interested in either design or animation and supplied in both 1 MB and 0.5 MB format.

CYBER PAINT

Free with this issue, *Cyber Paint* is the graphics package for *Cyber Studio* complete with animation, examples, and a full step-by-step guide which shows how to use the package and how to get the very best out of it! It requires 1MB to run.

CYBER CONTROL – NEXT ISSUE!

The final part of the series, *Cyber Control* is a fully operational commercial package that completes the Cyber animation and graphics series. It's a full animation language that is easy to use and will make your animations live. Needs 1MB.



IF YOU MISSED LAST MONTH'S CYBER PAINT AND WANT TO COLLECT THE WHOLE CYBER SERIES THEN DON'T FRET. JUST PHONE OUR BACK ISSUES DEPARTMENT ON 0858 410510 AND PLACE YOUR ORDER.

Cyber Paint is the second program in the Cyber Series trio. Each program can be used alone but using all three, you have the hottest graphics and animation package ever seen on the ST! Last month's Cyber Studio contained two versions – 1 MB and 0.5 MB.

This month we're giving you the second program Cyber Paint to colour your 3D designs. Next month's offering, Cyber Control, is a professional animation language that will animate your designs quickly and easily with devastating results! Collect all three for the most comprehensive design and animation package ever!

TURN OVER A NEW LEAF WITH ST REVIEW!

Next Month's 100 pages plus of editorial will include...

HARD DRIVES In next month's issue we present the ins and outs of hard disk drives – including all the benefits and how to use them to their full potential.

VIRUSES On the disk and in the mag we'll be giving you the full lowdown on those nasty little beasts, viruses in our Virus Special.

NEWS, REVIEWS AND BLUES! All of your favourite regular features are here. All of the latest news, the best reviews including new printers from Epson and, of course, the ST Buyer section with information, Ask The Experts, Letters and much, much more. Screen Scene is here, too, with the latest game reviews.

**ST REVIEW IS NOW ESTABLISHED AS THE UK'S BEST ST MAGAZINE
THE BEST EDITORIAL, THE BEST COVERDISKS AND THE
BEST COVERAGE FOR ANYONE WITH AN ST!
ON SALE 14TH JANUARY – ORDER IT NOW ON PAGE 130**

THAT WAS THE Y

As yet another year passes us by, Tony Dillon takes a look back along the most recent track of memory lane. Where were you when...?

Well, here we are in January again. As the tinsel and mistletoe are cleared away for another 12 months, let's take a moment to look back at the last year. 1992 will probably go down in most people's minds as the year that things got bigger and better. The Mega STE, the Falcon 030, the ST Book - Atari's new-found dedication to progress has never been so apparent. 1992 will also be remembered - hopefully - as the year that **ST Review** took the ST world by storm. But what else has happened in the last four seasons that's worth commenting on?

JANUARY

Bigger and better

Atari's year couldn't have got off to a better start. After months of speculation followed by months of waiting, the Mega STE finally started filling the shelves. A mid-step between a basic STE and the top-end TT machines, the Mega STE gave owners

the perfect upgrade path, with low-end compatibility and enough new tricks to merit the purchase. With TOS 2.05 on board, along with a new chip set, its comparatively low price (less than £830 for the basic one Megabyte machine) made it all the more attractive.

For standard ST owners who fancied boosting their machines in other directions, Silica systems introduced the first 386 emulator for the ST. The ATonce-386 PC board was previously only for TT owners, but finally the immense processing power was available to anyone who wanted it, and for only £299! If you wanted even more power, you could opt for a maths co-processor on top, for an additional £130, boosting the processor speed to around 18 Mhz!

If sounds are your thing, then January saw Microdeal launch a sub-£40 stereo sampling package. **Stereo Master** was a cut-down version of the more expensive **Stereo Replay**, and received mass acclaim and some tidy sales figures!

FEBRUARY

Small, but finely detailed

Not one to rest on its laurels for long, Atari continued its onslaught on the business market with the ST Book.

Launched at the 16-Bit show, the only ST Books to be found prior to the exhibition were in the safe hands of Sam Tramiel and Bill Rehbock, executives at Atari US. Retailing at £1300, the light unit - a mini-computer and personal organiser all in one, formed the conclusion to the ill-fated STacy project.

Good news for coders and developers this month came in the form of the official ST manuals.

Finally, Atari had seen the light and decided to let its previously top-secret documentation go public, giving Joe Public access to information about the machine that only top-level developers had had access to.

Released in five packages,

SEQUELMANIA!

In the games playing world, who could forget the release of two of the most impressive sequels ever, **Populous 2** and **Lotus 2**. If **Populous** was good (and you'll find very few people to tell you otherwise, then **Populous 2** must be even better.

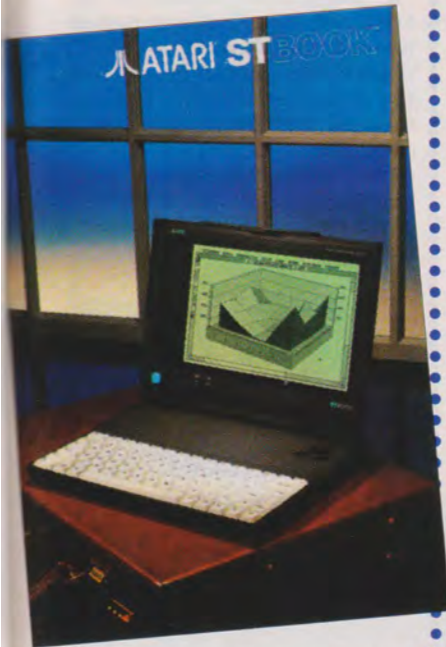
The ultimate in God-games, this one gave you more options than ever before, which was just what you needed when you consider the improved intelligence of the opposition.

As for **Lotus Turbo Challenge 2**, well, need we say more? The ultimate in racing, it's faster, smoother, more playable and more challenging than anything else. Except, perhaps **Lotus 3**, of course!



January saw the release of two classic sequels: **Lotus 2** (left) and **Populous 2** (above).

EAR THAT WAS



The ST Book – launched at the 16-Bit show.

the books cover all aspects of the ST and STE machines, from chip specification to GDOS and GEM Virtual Display Interface protocol. It certainly made for heavy late-night reading.

SMELLS FISHY!

ST owners were treated to one of the hottest platform games ever this month as the illustrious **James Pond** returned in another fishy tale – **Robocod**. Armed with an extendable waist and size 14 feet, our hero battled to save Santa from the evil clutches of Dr Maybe, and took the ST fraternity as close to **Super Mario World** as it is likely to get.

Interestingly, as we go to print, **Robocod** has just undergone a rebirth with its inclusion on US Gold's Raving Mad compilation – see our review on page 82 for more information.



James Pond 2 – Robocod saw the fishy hero turn into Santa's little helper.

MARCH

Taking things easy

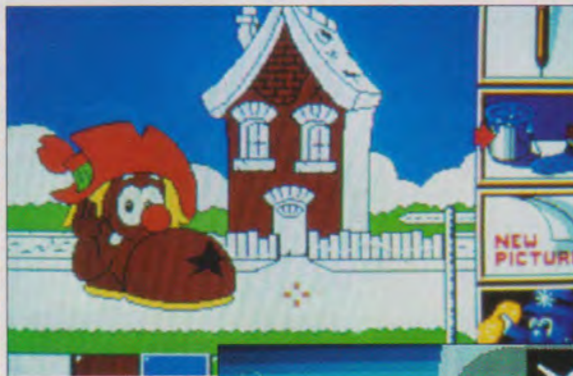
After the buzz of the initial months, the first quarter of the year ended on a calmer note. Biggest news this month was that Gremlin was going to enter the educational market with **Shoe People**, a series aimed at younger gamers and designed to help them with reading, spelling and general co-ordination. Similar in style to the **Fun School** series from Europress (**Fun School 4** had just been released), **Shoe People** was awarded praise from all sides, with quotes like 'the best ever' appearing left, right and centre.

Ocean Software came through with the license of

the year this month – **Robocop 3**. Oddly enough, the entire game was designed, coded and released just as the film, which has yet to be released, went into production. Featuring a first person perspective, the game was the most atmospheric Robo game to date.

Also released this month was **Mercenary 3**, which failed to stir the public as much as previous titles had. Could it be that we're all getting a little bored with huge polygon adventures? Surely not. One title that did wake up the public was **More Lemmings**, an extension to the classic game that spawned a million illegitimate offspring.

A hundred new levels for you to torture yourself with proved to be just the thing to welcome the spring.



Shoe People was Gremlin's first step into the educational market.

Ocean's Robocop 3 was the license of the year.



LOOKS AMAZING!

Graphic revelations came from both Delphine and Teque, in **Another World** and **Shadowlands** respectively. **Another World** took polygons to a new dimension, giving some of the most realistic and stylistic animation seen anywhere, whereas **Shadowlands**, the great isometric adventure, used a remarkable system called Photoscape to light the way, with real-time light source calculations. This was possibly the first game to appear on the scene that used torches in a realistic way!



APRIL

Dropping Like Flies

They tried and tried, but they still couldn't crack it. The Stylus, an intriguing peripheral that was allegedly going to be able to read your handwriting, thereby eliminating the need for a keyboard, was finally dropped this month, joining the other ghosts in Atari's airware graveyard. However, a new phoenix was rising from the ashes in the form of the Falcon 030. Little was known, other than that you were going to get TT screen modes and a 16Mhz processor for under £600. We waited with bated breath.

While we waited, we could console ourselves with the fact that hints weren't the only things being dropped. The price of the STE Discovery pack dropped to below £300, which meant that for mere pocket money you could get your hands on your very own virtual reality workstation, thanks to the latest in the STOS range – **STOS 3D**, which allowed you to build any shape you wanted and move it any way you wanted.

STOS 3D proved a worthy rival to **3D Construction Kit**.



MAY

Let's Get Started

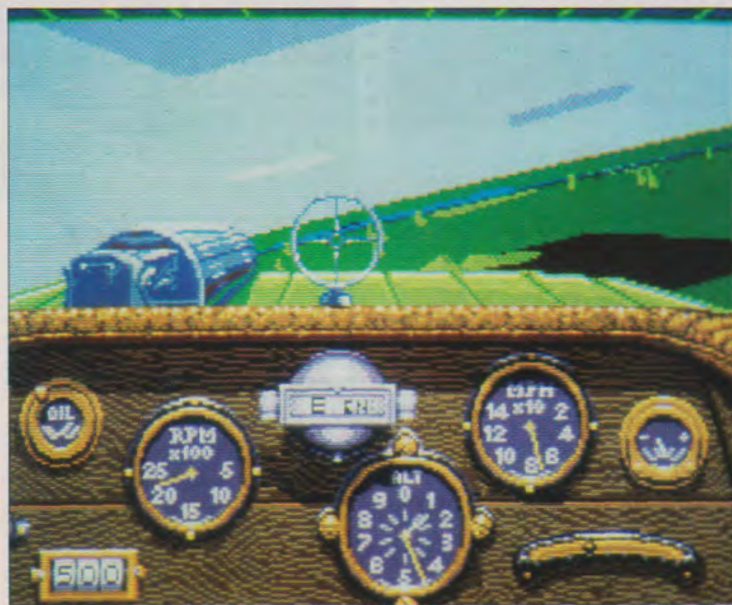
Who can forget the marvellous month of May? Possibly the most significant month in the ST's history since someone at Atari said "Why don't we make a 16-bit computer?", May saw the first issue of Atari ST Review hitting the shelves – hard! Crammed from cover to cover with everything you needed to know, the big news that month was the first solid details on the Falcon 030. Atari's favourite son was paraded in front of some very select eyes at the CeBit show in Hannover, and was described by our own Garth Sumpter as a "graphically blistering machine that should put the (Commodore) A600 in second place".

Accolade for most unusual piece of software this month went to the Fractal Music Composer from Fractal Music Company. This interesting little music utility allows you to create pieces of music from fractal seeds, giving you infinite recursions on the same tonal themes.

Wow, cosmic, or at least Chris Jenkins thought so, giving it a whacking 90% and slapping an essential buy sticker on it to boot!

Hot titles this month included **Space Crusade**, Gremlin's computer version of the classic space strategy boardgame, and **Knights Of The Sky**, a World War 1 bi-plane simulation from Microprose that featured no guided missiles, no long-range radar and absolutely no stealth tactics. What a great game.

Knights Of The Sky saw a return to traditional air warfare.



JUNE

Zoo Closes For The Summer

As the recession really started to bite in the software industry, Electronic Zoo, a leading software house with an impressively large catalogue, went under this month.

The company, which was responsible for handling **Subbuteo** and the odd **Eco Phantoms** were all geared up for a series of major launches when...nothing.

Still, if you were really desperate to get hold of a copy of **Magic Garden**, then fret not. Stewart Bell has recently resurfaced in the guise of ICE, and is releasing all those titles that the Zoo never got to put out.



The ProGate II extended Protar's range of hard drives.

Protar extended its range of hard drives this month to include the 19" rack mounted ProGate II series, designed for use in recording studios in direct to disk applications. Its high specification and low cost should make it a standard in recording studios across the country, starting at £280 for a 20 Meg version going up to customised models with over a Gigabyte of memory.

The big game this month was Microprose's **Formula One Grand Prix**, the latest and greatest from racing fanatic Geoff Crammond. Geoff's previous titles included **Stunt Car Racer** and the classic **Revs**, so who better to come out with the most realistic motor racing simulation ever. "An instant classic", said the review, giving an almighty 94%. Hands up anyone who hasn't bought a copy yet.

BYE BYE USA

US supremo Electronic Arts finally admitted that it was no longer developing for the ST, sparking a trend throughout the industry. At the time, the big title in development was a conversion of the SEGA Megadrive classic **John Madden's American Football**, but then EA pulled the plug. The reason? "We as a publisher have decided not to release the title because we believe that it will not produce a high enough return compared to other formats the game has been made available on." However, EA still holds all plans to continue distributing ST product developed by third parties, such as Millennium.

JULY

On Show Once More...

The 6th International Computer Show opened its doors to the public on 10th July, and featured one or two exciting new additions to the ST software range. Microdeal, always there with their hands in the music pot, came out with first glimpses of two new titles, **Concerto**, a budget 24-track sequencer and **Replay 16**, a mono 16-bit



sampler with full editing. Hi-Soft stepped forward with **Diamondback II**, the ultimate back-up system for hard drives, along with **Hi-Soft BASIC 2** and **High Speed Pascal**, for all you budding programmers.

Silica came out with yet another enticing ST bundle this month – the **Music Master** package, containing one of the best selling music programs of all time – **Steinberg Pro 24 v3.0**.

Generally regarded as one of the best of its kind, you could get it bundled along with all the other goodies Silica throws in for under £350.

Once you had your cracking new machine, you could try your hand at two of the hottest graphic adventure games ever, both released this month. **Ishar**, from Rage Software, was a MASSIVE title, viewed from a first person perspective and featuring no less than 160,000 bitmapped views!

If that isn't enough for you, then how about Virgin's stunning **Lure Of The Temptress**. The key selling point of this 90% essential buy was its Virtual Theatre game system, meaning that life in the game world went on regardless of what you did. People had their own lives, held conversations with each other and generally acted as you would expect them to in real life.



Silica Systems' Music Master package included one of the best-selling music packages ever.

AUGUST

Music Maestro, If You Please

The APRS (Association of Professional Recording Studios) music show came and went, and the ST was to be found on every stall and stand. One of the most important items was the ADAS direct-to-disk system from Plasmec Systems.

Retailing for under £600, the board uses a few hardware tricks to get around the basic ST speed problem, and comes up with a recording and editing system to match the best. Connect it up to a decent hard drive and you've got yourself a digital studio!

Atari came through this month with a new operating system, Multi-TOS, that is

partly intelligent, partly user-configurable, and all common sense. Using a combination of hardware and software, Mega ST and TT owners were now able to completely multi-task their machines, and thanks to some handy trapping software, the new system could isolate software that had crashed and still allow any other currently operating software to run. Unfortunately, this new system isn't available for ST/FM/E owners.

Piracy is a crime! This was the message that was sent out loud and clear this month as one Derek Kennedy was sentenced to 180 hours community service and fined £200 after being convicted of over 3000 cases of illegal copying and distribution. Let that be a lesson to any of you who might be considering piracy as a sideline!

SEPTEMBER

The Falcon Has Landed

Finally, after months of guesswork, rumours, private viewings, alterations and changed deadlines, the Falcon 030 dream machine is here. Well, at least in a finalised form, if not actually available to the public. The price? £399, not £600 as previously guessed at. It's got more bits built in than anyone could have hoped for. All that remains to be finalised is a release date.

In the meantime, Atari went all out to promote the new **Lynx/Batman Returns** promotional pack, with a 60-second commercial shown in cinemas all over the country, along with five million advertise-

ments placed in cinema magazines and the same number of leaflets sent to theatres everywhere.

In the games department, we were all football crazy, as **Sensible Soccer** received 93%, Rage's **Striker** got 90% and **Graham Taylor's Soccer Challenge** from Domark got 84%! There must be something in the water!

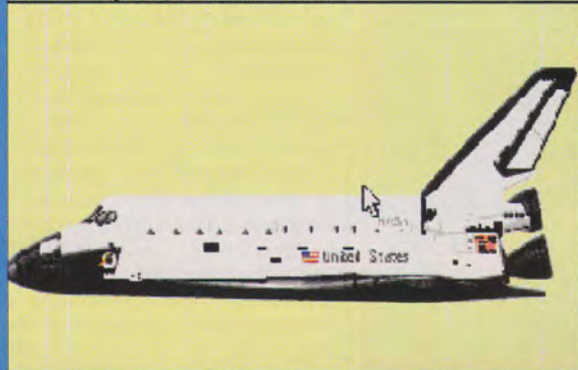


Striker and Sensible Soccer were just part of our early season madness.

SOMETHING'S COMING...

This month presented us with the first glimpse of Incentive's biggest project to date - **3D Construction Kit 2**, featuring masses of improvements over the original software, including transparent objects, a complete new menu-driven control system and a radically overhauled programming language. If you didn't want to wait to create your own polygon masterpieces, then you could try out Virgin's **Shuttle** simulation. It's a monster of a game that'll see you stuck to your screens and strapped in your seats for days. Authenticity is the name of the game, and with a control panel that scrolls over dozens of screens (we're not kidding!), this one could take months to conquer.

Order Log Info Sites Missions



Virgin's Shuttle took simulations to new heights.



The arrival of the dream machine, the Falcon 030, moved a step nearer this month.

ON A LITE(R) NOTE

This month's major essential buy is the piece of music software that absolutely no-one should be without - **Cubase Lite**. As its name suggests, it's a budget version of **Cubase**, although some would disagree with its categorisation due to a £99 pricepoint. But, as Vic Lennard pointed out shortly before slapping a massive 92% rating on to the review, equivalently capable packages, such as those that allow you to edit with score notation, as well as print out scores, cost up to and over £450!

OCTOBER

Going down, again!

Once again the price of the STE fell. Due to the recent drop in price of the A600, from £400 to a more reasonable £300, the STE prices were expected to fall as low as £225, meaning that in discount shops you could be able to buy a brand new, 520STE for under £200! Sadly, the Mega STE, which looked like being a real winner, was discontinued this month, with no plans to start a similar project.

The reason? Well, nobody can say for sure, but you can bet your boots it has something to do with people hanging on for the machine of 93 - the Falcon.

Big games news this month was the fact that **Streetfighter 2**, the game to buy a S-NES for, is coming to the ST. US Gold is handling the honours, and with any luck that should put paid to all the smug Super Nintendo owners, who were happy to buy grey imported copies at up to £100 each!

Piracy worries hit an all-time high this month, as Mindscape voiced its concern over pirated copies of games that had begun to turn up at car boot sales. Discussions began with FAST (Federation Against Software Theft) and other major software houses, to find a solution to this ever-present problem.

Just too late to join the previous month's batch of football titles comes Domark's **Championship Manager** - a statistic-heavy management affair that Steve 'Donkey' Merrett just couldn't keep his hands off. For more hands-on experience, you might want to try out Coktel Vision's **Fascination**, a graphic adventure classified 16 and over, due to its light smattering of smut and filth.

NOVEMBER

Closing For Christmas

This month, both Domark and Mindscape announced that they were dropping the ST from their development lists. This isn't to say that both companies won't support the Falcon when it comes along, but could this be another nail in the ST's gamesplaying coffin?

Another company closing its doors was Palace Software, but theirs was a little more terminal. Palace, the company behind Shoot-Em-Up-Construction Kit and the classic Barbarian games, went into

voluntary liquidation this month, leaving the Titus distribution deal up for grabs.

HMV finally gave into the demand and began stocking computer software this month, following on the lead that computer games are a bigger source of youth entertainment than singles.

Cheetah, a company that has always enjoyed releasing more unusual joysticks, such as the Bug, came out with some interesting character licenses this month in the form of joysticks shaped like your fave star, such as Bart Simpson or Batman. Perhaps not the most comfortable joystick to use, but it does make a very nice ornament.

MORE BALLS FROM ARCHER

Archer Maclean returned to our (computer) screens this month with the successor to the massive hit **Jimmy White's Whirlwind Snooker**, namely Archer Maclean's **3D Pool**. Using the same graphic engine as before, with the same control panel and identical gameplay, you might be forgiven for thinking that Archer had in fact released the same game twice. But, with improved computer intelligence, three different types of Pool (US and UK), along with a smattering of different tournament styles, he's managed to create the ultimate pool simulation.



DECEMBER

Going Live!

This month saw the computer event of the year - Gamesmaster Live at the Birmingham NEC between the 4th and the 6th. Not only do you get to see all the top new games, and play as many free arcade machines as you can find the time for, there are two Crystal Maze sets for you to run around on, a complete **Gamesmaster** set with regular challenges, Quaser light-gun arena and the odd bit of Virtual Reality!

L.A.P.D. (the public domain library, not the police force) have come under fire of the legal kind. Apparently Waddington's Games are none too happy about two PD titles currently available - namely **Risky** and **Napoleon**, due to their uncanny similarity to **Risk** and **Campaign**.

Hewlett Packard, the giants of laser printing, unveiled the future of desktop publishing - the HP Laserjet IV. At a press conference, spokesperson Cathy Lyons didn't rule out the possibility of old Laserjet III units being recalled and reconditioned to Lj IV standard, and then released at a knockdown price. "After all," she joked, "This equipment doesn't wear out!"

After months of speculation, exclusive pictures, exclusive specification lists and guesswork, the first Falcon 030s found their way into the UK this month. Only a limited supply were released into specialist shops (such as music hardware stockists).

Two models were released to the public. At entry level was the basic 1 Meg version without a hard drive for £499 inclusive. For the more dedicated user was the flashier 4 Meg model complete with 64 Meg hard drive for only £899 inclusive. Roll on 1993!



This arcade shot of **Streetfighter 2** gives a feel for what we can expect shortly on the ST.

BACK IN THE DRIVING SEAT

Ending the year in the same way they started it, Gremlin released the final title in the **Lotus** series - **Lotus 3, The Ultimate Challenge**. Featuring three billion different tracks, and a few new twists in the form of backgrounds, driving conditions and cars to drive, along with RECS, a revolutionary course construction system, the game is everything an arcade racer could want.

The game is definitely Shaun Southern's last driving escapade - he's sick of doing them - but as the package was designed utilising the feedback received after the launches of **Lotus 1 and 2**, it should be the best ever. For example, one included option is the choice between tracks against the clock or racing in a championship. You may not be able to please all of the people all of the time, but it looks like Gremlin are going to have a bloody good try. But is it really ultimate? We'll have to wait and see.

WHO CAN SAVE CIVILIZATION FROM THE MOST DESTRUCTIVE FORCE ON EARTH?

A few thousand years ago, Atlantis sank to the ocean floor. With it sank the secret of the most destructive force on earth. But the Nazis have rediscovered the lost Kingdom, and they'll soon have a bomb which can end World War II in fifteen minutes. Unless Indiana Jones gets in their way...

- Control two characters - Indy himself and his capable sidekick Sophia.
- Whips, weapons, fistfights, gambling and puzzles.
- Dazzling 3D isometric world - click from one camera angle to the next.
- Awesome animation, music and sound effects.
- 9 lavishly - detailed action-packed locations.

Available on:
Amstrad, C64 Cassette & Disk, Spectrum Cassette, Atari ST, Amiga & PC and Compatibles.



Break the bank in Monte Carlo - and buy a bundle of clues and weapons.



Borrow the keys to Adolf's submarine and take it for a ride.

Drop by the local watering hole for a friendly game of darts.



Screen shots are only intended to be illustrative of the gameplay and not the screen graphics which may vary considerably between different formats in quality and appearance and are subject to the computer specifications.

WHO ELSE?

INDIANA JONES™ and the FATE of ATLANTIS

LucasArts
Lucasfilm Games

U.S. GOLD

Indiana Jones is a registered trademark of Lucasfilm Limited. Lucasfilm Games is a trademark of LucasArts Entertainment company. Indiana Jones and the Fate of Atlantis © 1992 LucasArts Entertainment company. Used under authorisation by U.S. Gold Limited, Units 2/3, Holford Way, Holford, Birmingham, B6 7AX. Tel: 021-625 3366. All rights reserved. All other trademarks are acknowledged as the property of their respective owners.



The ACTION game with much, much, more

PHONE

HINTS TIPS 'N' CALL THE GOLD PHONE: SPELLJAMMER • PROPHECY OF THE SHADOW • THE SUMMONING • DARK SUN • EYE OF THE BEHOLDER • LEGEND OF DARKMOON (EYE OF THE BEHOLDER II) • DRAGONS OF FLAME • HEROES OF THE LANCE TEL: 0839 654 139 OPERATION STEALTH • ANOTHER WORLD • FLASHBACK • CRUISE FOR A CORPSE TEL: 0839 654 264 LUCASFILM HELPLINE • LECHUCK'S REVENGE (MONKEY ISLAND 2) • INDIANA JONES (LAST CRUSADE & FATE OF ATLANTIS) • ZAK McKracken • MANIAC MANSION • LOOM • SECRET OF MONKEY ISLAND • BATTLE OF BRITAIN TEL: 0839 654 123 INFORMATION LINE: 0839 654 124 • LEGENDS OF VALOUR TEL: 0839 993 366 • ACCESS HELPLINE: AMAZON TEL: 0839 654 394 • SIR TACH HELPLINE: CRUSADERS OF THE DARK SAVANT TEL: 0839 994 477
Service provided by U.S. GOLD LTD., UNITS 2/3 HOLFORD WAY, HOLFORD, BIRMINGHAM B6 7AX. If you are under 18 please get permission to use the telephone. Calls cost 36p per minute (excl. VAT), 48p per minute all other times.

Just in time to help you decide what to get for Christmas, here's part two of our round-up of electronic organisers...



GET YOURSELF

AMSTRAD NC100 NOTEPAD

AMSTRAD • £199 • 64K

IN BRIEF: In the strictest sense, this is not really a personal organiser but a small laptop computer. Functionally, it compares favourably with the other organisers,

but it is considerably larger.

This unit is ideal for the business traveller who has a lot of notes or letters to write. The keyboard is large enough to use comfortably and it is described as being 'user friendly'.

It's certainly easy to use the main functions, but if you want to program it, it's a little more complex. It comes with a fully

functioning word processor, diary/calendar, calculator, clock, address book and time manager built-in and has a standard memory of 64K, expandable to 1024K by using industry standard PCMCIA 2.0 cards.

With BBC BASIC built in, you can even program the computer yourself and sample programs are provided in the manual. The calculator lets it down in that the numeric keys are part of the main keyboard. This has resulted in some of the keys having green numbers printed on them, making them cluttered. It would have been better to have a separate numeric keypad or just the normal numbers along the top row.

ST REVIEW COMMENT:

"The general feeling from all who see the Notepad is that it's suffering from an identity crisis. It doesn't seem to know whether it is an organiser or a laptop computer and fails to be either."



ATARI PORTFOLIO

ATARI • £249 • 128K

IN BRIEF: Another pocket computer that doesn't quite fit into the organiser category, but this one has much more success than the Amstrad! The Portfolio is actually classified as a hand-held computer and is PC compatible. All of the commands are basic DOS commands, so a knowledge of the PC is a definite advantage.

Standard features include a spreadsheet, text editor, address book, diary and calculator. From the keyboard, you can also access a setup menu and a menu listing all of the functions.

This one is larger than most of the other organisers that we have reviewed over the past two months, but not big enough to reduce its portability. It will take memory expansion and program cards via a slot in the side.

Provided with the machine that we received for review was a file manager and tutorial card that gives an idea of how to use everything and enables you to easily find things in the files.

To alter the programming, a knowledge of DOS is required. You need to know how to config-



The Amstrad Notepad – it's big, looks like a typewriter, has diary functions but suffers from an alarming identity crisis. Just what is it?



ORGANISED!



Billed as a hand-held computer, the Portfolio offers a good range of functions.

ure AUTOEXEC.BAT batch files and CONFIG.SYS files to actually use the Portfolio for anything other than just the functions listed above, but if you take the time to learn this, or if you are already conversant with the quirks of DOS, then it's a very powerful little tool.

ST REVIEW COMMENT: "A useful little gadget, provided that you are prepared to invest the time and effort in learning how to use it.

This is a lot more than just another organiser and, compared to the Sharp or the Casio, it doesn't really measure up, but add the PC compatibility and the programming functions and you have a valuable package."



SF-5100 DIGITAL DIARY

CASIO • £64.99 • 32 K

IN BRIEF: Without wanting to be sexist about such inanimate objects, there is a distinctly feminine feel to this organiser. Its grey case and pastel shades certainly give it an attractive appearance that would appeal to the ladies. It's not just a pretty face, though. It has a range of features, all of which are easy to get

to grips with, and an excellent user manual which is misleading in its size, since instructions are in three languages.

The icons featured on the keypad, which are cross-referenced in the manual, make for easy access to the required functions, and the procedure for entering, editing and searching for data in the telephone directory, memo, schedule and reminder follows the same pattern.

The telephone directory gives you space for a name, telephone

ATARI ST REVIEW
ESSENTIAL BUY



Stylish and compact, Casio's SF-5100 is designed to please.

number, address and up to six 'free' entries, meaning that you can include such details as birthdays and anniversaries.

The memo function gives you a maximum of 384 characters, which is plenty for most messages that you're likely to write. The world time function features the current time in any one of 29 time zones around the world. When you enter the function, you are presented with a map of the world (which is just about recognisable and is actually a reasonable achievement, given the digital display).

To change the time zone, all you need to do is to simply scroll across the screen, whizzing through the world as you do so.

The SF-5100 can be linked to another SF unit or a PC for data transfer, and data can also be stored on a floppy disk.

Of course, to do this you will need additional cables and software - and according to the manual, the latter isn't available 'in certain geographic areas'.

This isn't, however, a major problem - such abilities are a bonus in an organiser of this size, rather than an absolute essential.

ST REVIEW COMMENT: "This is an extremely attractive and user-friendly device. If you're looking for an organiser capable of various functions, but don't want to spend a week trying to work out how to use it, buy this one - now!"

★★★★★

SF-4300 DIGITAL DIARY

CASIO • £59.99 • 32 K

IN BRIEF: This model is very similar to the SF-5100 and most of the differences between the two are cosmetic. Its appearance is much more rough and ready than its cousin - it is slightly lighter than the 5100 at 110 grams, as opposed to the former's 130 g and it certainly feels flimsier. The case isn't sprung as with the 5100, and upon opening you get the impression that it could easily break.

The keys on this model are rubber, as opposed to the plastic ones on the 5100 and are therefore less comfortable to use.

All of the functions are carried out in exactly the same way as the 5100 and the data transfer facilities are the same, as is the use of icons. Indeed, the two machines are so similar that if you put the two manuals side by side, and you'll have trouble working out which one is which.

One point that it does score over its cousin is the inclusion on the inside of the lid of instructions for the main data functions, meaning that you don't have to refer to the



The SF-4300 may not look as dashing as its big brother, but in true Casio style, it offers similar functions and a familiar feel.

manual so often. However, this sacrifices the handy separate calculator keypad that is one of the major advantages of the 5100. I suppose it's a case of "you can't have your cake and eat it, but I for one prefer the arrangement on the SF-5100.

Whereas the 5100 makes full use of the inside of the lid for the screen, function keys and a separate calculator keypad, all of these features are crammed onto the

keypad on this model, giving it a more cluttered look.

ST REVIEW COMMENT: "This may come across in some respects as a poor relation to the 5100, but if money's a bit tight or you're not greatly influenced by appearances, this is still an easy-to-use device that will take next to no time to become familiar with."

★★★★★

BUYERS GUIDE

	ATARI PORTFOLIO	AMSTRAD NC 100	CASIO DATA CAL DC-830	CASIO SF 9300	CASIO SF 8300
PRICE	£249.00	£199.00	£19.99	£169	£119.00
MEMORY	128K	64K	150 ITEMS	64K	64K
KEYBOARD	K	K	T	K	K
FUNCTION KEYS	10	4	4	10+5	9
CALCULATOR	★	★	★	★	★
WORLD TIME	★	★	NO	★	★
HOME TIME	★	★	★	★	★
SCHEDULE	★	★	★	★	★
CALENDAR	★	NO	NO	★	★
PASSWORD	NO	★	★	★	★
COMMUNICATIONS	★	★	NO	★	★
PHONE DIRECTORY	★	★	★	★	★
ADDRESS BOOK	★	NO	NO	★	★
MEMO	NO	NO	NO	★	★
BUSINESS ADDRESS	NO	★	NO	★	★
GAME/MEMORY CARDS	★	★	NO	NO	★
SPREADSHEETS	★	★	NO	NO	ON CARD
WORD PROCESSOR	★	★	NO	NO	NO



Virtually identical, the only differences between these two lie in the IC card system and the extra £50 price tag.

SF-9300 DIGITAL DIARY

CASIO • £169.95 inc • 64K

IN BRIEF: The SF-9300 is virtually identical in specification to its smaller brother the 8300 but the extra £50 it costs gives you the advantage of being able to use the Casio IC system.

These are cards which slot into the machine and enable the user to extend either the size of the machine's memory or to add a new software function like a game, a spreadsheet or a specialist application like a scientific calculator.

In terms of its more basic functions the diary is virtually identical to the 8300 but has the addition

of five function keys which are utilised by the slot-in cards. There is also a four button cursor pad which replaces the four arrow keys for cursor movement.

Small, light and nicely shaped, the 9300 slips easily into a pocket or handbag and can hold many times more information than any similarly sized filofax, and recall of any data is fast as all entries are automatically sorted into alphabetical order. With the inclusion of a selectable alarm function to cover

ST REVIEW COMMENT: "I used one of the earlier, non-card versions of this machine and found it invaluable. As a casual organiser for phone numbers, addresses, memos and birthdays they are excellent, although the plug-in cards seem very pricey."

★★★★

DATA CAL DC-830 BK

CASIO • £19.99 • 150 ITEMS

IN BRIEF: This is really the smallest organiser that you can get. The size of a credit card and only slightly thicker, the DC-830 can hardly match up to any of the other machines we've looked at. However, it's included here as it has to score the highest of any of them in at least two areas - portability and price.

The DC-830 really is small enough to fit in with your credit cards and any other bits of plastic and so should be the sort of thing that you can carry around with you everywhere.

A touch sensitive keyboard allows you to enter information - this will consist predominantly of telephone numbers, but there is space for names although this is

limited to eight letters. You will find, however, that the space provided for telephone numbers is not sufficient to enter some international numbers.

The schedule is very basic, but it will prove useful for providing simple reminders using the in-built alarm.

A password key is included but it's difficult to see any reason for denying access to phone numbers that rarely contain any full name entries.

ST REVIEW COMMENT: "The DC-830 does nothing well. Its alarm is weak, lack of space for input make surname and initial entry for telephone numbers compulsory and the alarm is quiet. However, for storing telephone numbers whilst you are on the move it's great! This one is completely portable and surprisingly robust for its size!"

★★★★

CASIO SF 5100

£64.99

32K

K

8

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

CASIO SF 4800

£59.99

32K

K

8

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

★

ATARI ST REVIEW
BUDGET BUY



The smallest and handiest, credit card sized offering acts as a portable phone number back up system.

AT ECU, WE TAKE YOUR GAME PLAYING SERIOUSLY

TITLE	PUBLISHER	PRICE
3D CONS 2	DOMARK	32.99
4D SPORTS DRIVING	CLASSIC	11.99
A320 AIRBUS	THALION	21.99
ADS	ACTION 16	6.99
AIRBUS N AMERICAN EDT	THALION	23.99
AQUATIC GAMES	MILLENNIUM	16.99
ARCHER MACLEANS POOL	VIRGIN	19.99
AV8B HARRIER	DOMARK	26.50
BAT 2	UBI SOFT	23.99
BATTLE CHESS	STAR PERFORMERS	9.99
BATTLE OF BRITAIN	LUCASFILM	19.99
BIG RUN	STORM	5.99
BUBBLE BOBBLE	HIT SQUAD	6.99
BUNNY BRICKS	SILMARILS	16.99
CAMPAIGN	EMPIRE	22.99
CASTLES	ELECTRONIC ARTS	23.99
CENTURION	STAR PERFORMERS	8.99
CHAMPIONSHIP MANAGER	DOMARK	16.99
COOL WORLD	OCEAN	16.99
CRAZY CARS 2	TITUS	8.99
CRAZY CARS 3	TITUS	22.99
CRICKET CAPTAIN	D & H	8.99
CRUISE FOR A CORPSE	US GOLD	18.99
CRYSTAL KINGDOM DIZZY	CODEMASTERS	14.99
D/GENERATION	CLASSIC	11.99
DIZZY PANIC	CODEMASTERS	6.99
DOODLE BUG	CORE	16.99
DOUBLE DRAGON 3	STORM	7.99
DRAGON'S BREATH	GBH	8.99
DUNGEON MASTER/CHAOS	PSYGNOSIS	22.99
ELVIRA	ACCOLADE	20.99
ELVIRA 2	ACCOLADE	22.99
EMLYN HUGHES	TOUCHDOWN	8.99
EPIC	OCEAN	19.99
F16 COMBAT PILOT	ACTION 16	8.99
FALCON	ACTION 16	11.99
FALCON MISSION DISK 1	ACTION 16	8.99
FALCON MISSION DISK 2	ACTION 16	8.99
FASCINATION	DIGITAL INTEGRATION	19.99
FINAL BLOW	STORM	5.99
FIRE AND FORGET 2	TITUS	8.99
FIRE AND ICE	RENEGADE	16.99
FOOTBALL MANAGER 3	ADDICTIVE	16.99
FORMULA ONE GP	MICROPROSE	22.99
GOBLIINS	DREAM FACTORY	16.99
GRAHAM SOUNESS SOCCER	CODEMASTERS	6.99
GRAHAM TAYLORS FOOTBALL	KRISALIS	16.99
GUY SPY	READYSOFT	19.99
HEAD OVER HEELS	HIT SQUAD	6.99
HOOK	OCEAN	16.99
INTL RUGBY CHALLENGE	DOMARK	16.99
INTL SPORTS CHALLENGE	EMPIRE	19.99
ISHAR	SILMARILS	17.99
JACK NICKLAUS GOLF	HIT SQUAD	6.99
JAMES POND	GBH	6.99
JIMMY WHITE'S SNOOKER	VIRGIN	19.99
JOHN BARNES FOOTBALL	KRISALIS	16.99
KNIGHTS OF THE SKY	MICROPROSE	22.99
LAST NINJA 3	SYSTEM 3	16.99
LEGEND	MINDSCAPE	19.99
LEGENDS OF VALOUR	US GOLD	25.50
LEMMINGS DATA DISK	PSYGNOSIS	13.99
LEMMINGS DOUBLE PACK	PSYGNOSIS	19.99
LETHAL WEAPON 3	OCEAN	16.99
LOTUS 1	GBH	8.99
LOTUS 3 ULTIMATE CHALL	GREMLIN	16.99
LURE OF THE TEMPTRESS	VIRGIN	19.99



THIS IS THE FRONT COVER TO THE EUROPEAN COMPUTER USER MAGAZINE. FULL DETAILS OF ST, AMIGA AND PC RELEASES, COMMENTARY BY EXPERTS AND NO FAKE SCORES. FOR YOUR COMPLIMENTARY COPY, CALL US TODAY (NO PURCHASE NECESSARY)



TITLE	PUBLISHER	PRICE
M1 TANK PLATOON	MICROPROSE	19.99
MACDONALDS LAND	VIRGIN	16.99
MAGIC POCKETS	MINDSCAPE	16.99
MAN UTD	GBH	8.99
MAN UTD EUROPE	KRISALIS	16.99
MERCENARY 3	NOVAGEN	9.99
MICROPROSE GOLF	MICROPROSE	22.99
MOONSTONE	MINDSCAPE	19.99
MOTORHEAD	VIRGIN	12.99
N. MANSELLS WORLD CHAMP	GREMLIN	19.99
NIGHT APPROACH ADD ON A320	THALION	16.99
NORTH AND SOUTH	ACTION 16	6.99
NO SECOND PRIZE	THALION	16.99
OUTRUN EUROPA	US GOLD	16.99
PANG	HIT SQUAD	6.99
PARASOL STARS	OCEAN	16.99
POPULOUS	STAR PERFORMERS	9.99
POPULOUS 2	ELECTRONIC ARTS	19.99
PREMIER MANAGER	GREMLIN	16.99
PRO TENNIS TOUR	HITSQUAD	6.99
PUSH OVER	OCEAN	16.99
PUZZNIC	HIT SQUAD	6.99
RAMPART	DOMARK	16.99
REACH FOR THE SKIES	VIRGIN	19.99
ROBOCOD	MILLENNIUM	15.99
ROBOCOP 3	OCEAN	16.99
SABRE TEAM	KRISALIS	16.99
SECRET OF MONKEY ISLAND	US GOLD	16.99
SENSIBLE SOCCER	RENEGADE	16.99
SHADOW WORLDS	KRISALIS	16.99
SHOOT EM UP CONS KIT	PALACE	6.99
SHUTTLE	VIRGIN	19.99
SILENT SERVICE 2	MICROPROSE	22.99
SPECIAL FORCES	MICROPROSE	22.99
STREETFIGHTER 2	US GOLD	17.99
STRIKER	RAGE	16.99
SUPER CARS	GBH	6.99
SUPER OFF ROAD	TRONIX	8.99
SUPERSKI 2	MICROIDS	6.99
TEAM YANKEE 2	EMPIRE	19.99
TITUS THE FOX	TITUS	16.99
ULTIMA 6	ORIGIN	19.99
ULTIMATE GOLF	GBH	8.99
UNIVERSAL MONSTERS	OCEAN	16.99
VIDEO KID	OCEAN	16.99
VIZ	VIRGIN	8.99
VROOM	UBI SOFT	16.99
W/C LEADERBOARD	KIXX	8.99
WIZ KID	OCEAN	16.99
WWF 2 RAMPAGE	OCEAN	16.99
COMPILATIONS		
AIR SEA SUPREMACY	S-SERVICE/GUNSHIP/WINGS/C-COMMAND/P47 T-BOLT	19.99
AWARD WINNERS	POPULOUS/K.O.2/PIPEMANIA/SPACE ACE	16.99
BITMAP BROS VOL 1	XENON/CADAVER/SPEEDBALL 2	16.99
COMBAT CLASSICS	TEAM YANKEE/688 ATTACK/SUB/F15 STRIKE EAGLE 2	19.99
DIZZY COLLECTION	FAST FOOD/KWIK SNAX/MAGIC LAND/FANTASY WORLD/TREASURE ISLAND	16.99
DIZZY'S EXCELLENT ADVENTURES	SPELLBOUND/PANIC/43 OTHER DIZZY GAMES	16.99
DOUBLE CONFRONTATION	MEGALOMANIA/FIRST SAMURAI	19.99
DREAM TEAM	T2/WWF/SIMPSONS	16.99
MAGIC WORLDS	DRAGONS BREATH/STORM MASTER/CRYSTALS OF ARBOREA	19.99
MEGASPORTS	SUMMER GAMES 1 & 2/CALIFORNIA GAMES/WINTER GAMES/THE GAMES	19.99
PSYCHOS SOCCER COLLECT	KO2/INT SOCC CHALL/WORLD CHAMP SOCC/MAN U	19.99
QUEST FOR ADVENTURE	INDY JONES ADV/OP STEALTH/MEAN STREETS	22.99
SOCCER STARS	KICK OFF 2/GAZZA 2/MICROPROSE SOCCER/ EMLYN HUGHES	16.99
SUPER ALL-STARS	STEB THE SLUG/MAGIC LAND DIZZY/CAPT DYNAMO/CJ IN USAROBIN HOOD	16.99
SUPER FIGHTER	FINAL FIGHT/WWF/PITFIGHTER	16.99
TOO HOT TO HANDLE	SHADOWLANDS/GOLDEN AXE/TOTAL RECALL/SUPER OFF-ROAD	19.99

PHONE HOTLINE: 0480 498889
FAX HOTLINE: 0480 496379

EUROPEAN COMPUTER USER Units A2/A3 Edison Road, St Ives, Huntingdon, Cambs, PE17 4LF. Phone 0480 498889, Fax 0480 496379. Office hours Monday to Friday 9.00am to 6.00pm. Answer machine operates outside office hours. Personal callers welcome. Credit card orders charged only on despatch of games (no surcharge). Allow 5 working days from receipt of order for cheque clearance. Make cheques, postal orders and international money orders (sterling only) payable to EUROPEAN COMPUTER USER.

All items featured are SUBJECT TO AVAILABILITY. All prices are subject to change without notice. E & O E. All orders are dealt with immediately provided the goods are in stock at the time of your order being processed. However, we may take up to a maximum of 28 days to deliver from receipt of order, with the exception of overseas orders which make take longer.

POST AND PACKAGING: UK, 75p per item 2nd Class, £1.50 per item 1st Class, £1.80 per item 1st class recorded. EEC £2.75 per item, non EEC £3.75 per item, Express Air mail £4.75 per item.

If you do not wish your details to be added to our database for other direct mail, including regular issues of ECU magazine, please tick the box on the form provided, or tell our staff when you call.

VISA

SOME TITLES MAY NOT BE RELEASED AT THE TIME OF GOING TO PRESS
PLEASE TELEPHONE FOR AVAILABILITY AND A COPY OF OUR FULL TERMS AND CONDITIONS.

MasterCard

NAME

ADDRESS

POSTCODE

PHONE

ITEM

ITEM

ITEM

PRICE

PRICE

PRICE

POSTAGE

TOTAL

Visa/Mastercard/Switch Number:

Switch issue No:

Card Expiry Date:

SIGNATURE:

☐ TICK THIS BOX IF YOU DO NOT WISH TO BE ENTERED ONTO THE ECU DATABASE

Make cheques payable to: European Computer User & send to: Units A2/A3 Edison Rd, St. Ives, Huntingdon, CAMBS PE17 4LF

Analogic Computers (U.K.) Ltd

Unit 6, Ashway Centre,

Elm Crescent,

Kingston-Upon-Thames, Surrey KT2 6HH

Mon-Fri. 9am to 7pm Sat 9am to 5.30pm

TEL: 081-546-9575

FAX/TEL: 081-541-4671

**ANALOGIC
ANALOGIC
ANALOGIC**

THE OFFICIAL ATARI REPAIR CENTRE

• COMPUTERS • PRINTERS • MONITORS REPAIRS WITHOUT DIAGNOSTIC FEES

520/1040 ST/STM/STF/STFM/STE£59.95

Including next day delivery by Courier service.

- Fixed Charges ● Very Fast Turnaround
- All repairs carry a full 90 Day Guarantee

Printers and MonitorsPlease ring for quotation

**Door to door
courier service**

We pick up computers for repairs and memory upgrades for
Next Day delivery by Courier service for only £5.00 + VAT

MEMORY UPGRADES

MARPET DEVELOPMENTS OFFICIAL XTRA-RAM DELUXE INSTALLERS

520 STF/STFM to 1 Meg	* £59.95	520 STE to 1 Meg	* £17.95
520 ST/STM/STF/STFM to 2.5 Meg.£89.95		520 STE to 2 Meg	* £59.95
520 ST/STM/STF/STFM to 4 Meg.£139.95		520 STE to 4 Meg	* £114.95

EMULATORS and ACCELERATORS

PC Speed.....	£89.95	Vortex 386 SX-16.....	£349.95
AT Speed 8.....	£134.95	AD Speed ST.....	* £144.95
AT Speed C16	£199.95	AD Speed STE.....	£169.95

STE, MEGA STE, FALCON 030 COMPUTERS

520 STE Discovery Xtra Pack II
1040 STE Family Curriculum Pack II
Mega STE
Falcon 030

512k 1 Meg 2 Meg 4 Meg



PROTAR HARD DRIVES (New Protar Series 2)

Profile 40	£289.00
Profile 40 DC	£309.00
Profile 50 DC	£369.00
Profile 80	£429.00
Profile 100 DC	£499.00
Profile R44	£579.00

All Protar Hard Drives with Disk Cache have
2 year replacement warranty.
New Protar series 2 accept a second internal drive
• Support upto 7 extra SCSI devices • Autobooting
• DMA Throughport • Device Number Switching
• Disk Management Software

MONITORS

Atari SM146 High Resolution Monochrome Monitor	POA
Atari SC1435 Colour Monitor	£215.00
Philips CM8833 Mk II	POA
Philips 14" TV/Monitor (Designer Model) + Remote Control + Scart Cable	£255.00
Philips 15" TV/Monitor + Remote Control + Scart Cable (Model 3332)	£239.00
Philips 15" TV/Monitor as above with Teletext (Model 2331)	£269.00

POWER SUPPLIES

STFM/STE Power Supplies (Service Exchange)	£34.95
NEW STFM/STE Power supplies with ONE YEAR GUARANTEE	£44.95

PRINTERS

Star LC20 Mono	£139.95
Star LC200 Colour	£199.95
Star LC24-20	£204.95
Star LC24-200 Mono	£254.95
Star LC24-200 Colour	£279.95
Citizen 120D+	£129.95

ACCESSORIES and INTERFACES

STE/STFM Scart Lead	£14.95	Dust Cover	£4.95
STE/STFM Lead to Philips CM8833 II	£14.95	Mouse Mat	£4.95
Philips CM8833 Dust Cover	£6.95	10 Blank Discs	£5.95
Twin Joystick/Mouse Port extension	£69.95	AD SCSI	£69.95
Lead	£5.95	AD SCSI with clock	£79.95
Squik Mouse	£14.95	Forget Me Clock	£16.95

DISK DRIVES

High Density 3.5" Internal Drive	£54.95
1 Meg 3.5" Internal Drive	£44.95
1 Meg 3.5" External Drive with its own PSU	£59.95

Citizen 124D	£179.95
Citizen Swift 9	£189.95
Citizen Swift 24E (Colour)	£289.95

Please ring for Canon, Panasonic and HP range

GUARANTEED SAME DAY DISPATCH (subject to availability)

NOW AVAILABLE NEW TOS 2.06

STE ROMS £39.95. All other STs £59.95 includes Decoder and ROMs. You have an option for Hardware/Software switch to use New/Old TOS as and when you wish.

RENT-A-COMPUTER

Professional Service with no surcharge

WHILE-U-WAIT!!!

◆ MEMORY UPGRADES ◆ TOS UPGRADES ◆ DISK DRIVE UPGRADES
◆ EMULATORS ◆ ACCELERATORS ◆ many REPAIRS

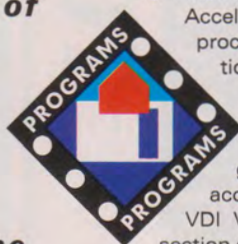


- ★ All prices include VAT and NEXT DAY DELIVERY subject to availability
- ★ Fixed charge for repair does not include Disk Drive Replacement & Keyboard
- ★ All prices subject to change without notice
- ★ We reserve the right to refuse any ST Repair



FAST FORWARD

Hardware accelerators are a good way of speeding up the performance of your ST, but they need fitting and can be expensive. The alternative could be a software accelerator. Tony Kaye looks at two packages that have recently been improved



Both *Warp 9* and *NVDI* have undergone new updates recently. To understand their purpose, we need to be aware of what they do and the advantages of installing them.

Accelerators speed up the process of placing information on the screen. One immediate advantage is that the time taken to open a window is greatly reduced. Most accelerators work on the VDI (Visual Display Interface) section of the display.

The VDI is, in simple terms, the process of displaying information on the screen. So the faster this is handled the faster the screen can be updated.

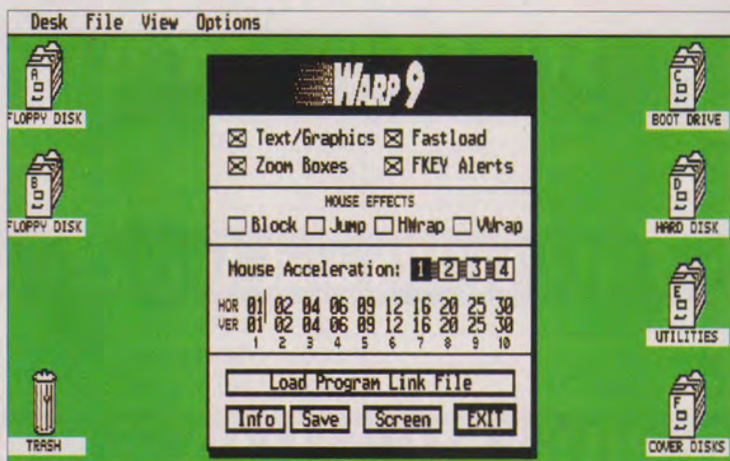
GROWING PAINS

One of the features of the GEM desktop is that when you open a box, a growing outline appears. This is visually effective, but it slows the process down.

By eliminating the growing box, the action of opening a box speeds up dramatically. Add to this other speed-enhancing tricks and an accelerator is born.

WARP 9

Warp 9 from Codehead Software in the USA is a no-nonsense accelerator that does its job well. The program comes with a host of util-

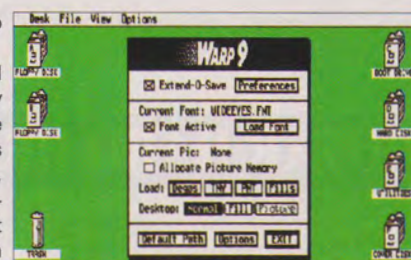


From the *Warp 9* Accessory the option screen allows you to adjust the speed settings.

ities that can be configured to suit your own requirements.

These are all accessed through a desk accessory which offers two screens. The first is for the options such as mouse speed and scrolling, using the F1 to F3 keys as alternatives to the mouse for alert boxes, zooming boxes and a fast loading feature.

The second of these screens deals with the screen options. From here, you can change the display font, turn the screen save on or off or have a patterned fill or picture on the desktop instead of the normal green background.



Change the screen saver and font as well as a background picture or pattern here.

NVDI

NVDI hails from Germany and includes such features as GDOS and mouse acceleration. The control panel for this program can be loaded as an accessory or as a CPX extension for the Atari Xcontrol panel (which was given away on the cover disk of Issue five). This gives you control over the main functions.

NVDI is practical and functional, but it does have one drawback for the casual user. If you try to run *Timeworks* or another program that requires the use of GDOS fonts, then you can't easily run *NVDI*. The answer is to go into some nifty adjustments at code level or, much more simply, disable the accelerator.

Unfortunately, the latest version was stuck at customs at the time of reviewing, so this test uses the current version, 2.03.

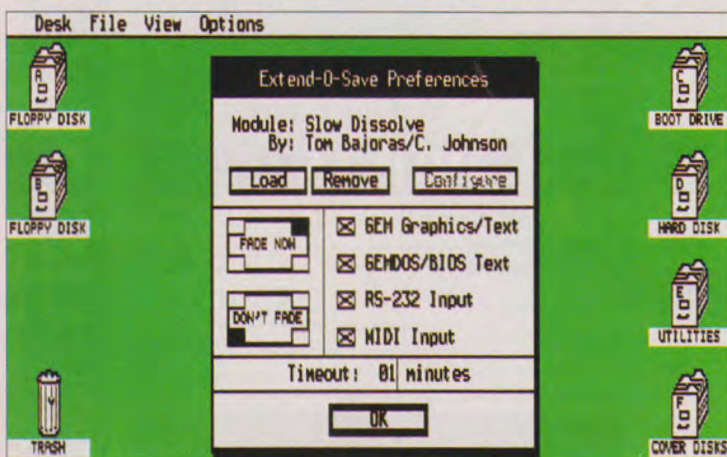
"Slightly slower than NVDI, but fully featured and easy to use"

NAME: WARP 9
COMPANY: ST CLUB
CONTACT: 0602 410241

PRICE: £24.95
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

SPEED ★★★★★☆
DOCUMENTATION ★★★★★☆
ADDITIONAL FACILITIES ★★★★★☆
VALUE FOR MONEY ★★★★★☆

OVERALL **88%**



Change the screen saver and set when it is to be active from this menu.



Pictured above is the accessory for changing the settings in NVDI.

THE TESTS

Both **NVDI** and **Warp 9** were put through the same series of tests. There are other tests available, but these give a representative sample and a fair view of each program's capabilities. The benchmarks used were: **The Benchmark** by Ofir Gal; **NBM** (the Ness Benchmark) by Jim Ness; **GEM Test** from NVDI; and **Quick Index V2.2**.

THE RESULTS

Both programs do the job quite well. You certainly notice when an accelerator is not loaded when you've been working with one for a while.

For the impatient, some kind of acceleration is a must on the ST. My personal preference? Well, I liked them both and can see very definite advantages to each. NVDI is certainly the faster and most expensive of the two, but it can be used for most applications. However, as screen redraws are

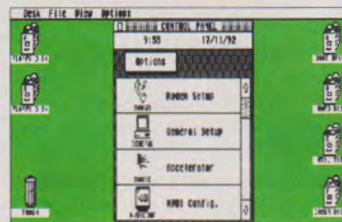
the main speed advantage, **Warp 9** is certainly easier to use when you are running GDOS programs such as **Timeworks**.

Both packages have particular advantages of being able to use both programs, but if I had to part with my money for only one, I think I'd take a slight reduction in speed and go for the cheaper

Warp 9 which is half the price of **NVDI**. Having said that, a new version of **NVDI** is due to arrive in this country at the time of writing, and we'll be looking at it next issue for any of you who'd like to reserve judgement until you've seen the latest version of **NVDI**.



Using XControl, the NVDI setting program is available as a CPX.



Situated at the bottom of the control panel selector is a module for NVDI Config.

CONCLUSIONS

Both programs and are well worth considering. Although they both have disadvantages. In operation, they do their job well, so to make a decision you need to look at what is offered in the package. **NVDI** is great for speed, but I don't like having to play around to use GDOS programs. **Warp 9** offers a range of utilities but it is slightly slower. If price is important, unless you have a specific reason for wanting **NVDI**, then it has to be **Warp 9**. I'd still like to reserve final judgment until we've reviewed the latest version, but it will need to be special. Both of these programs offer an ideal alternative to fitting hardware like a Turbo 25 board.

TEST RESULTS

Here are the final screens from all of the tests. They show the high and low points of both programs in terms of speed.

NVDI V2.03

TEST

WARP 9

Test	Time	Ratio
GEM Dialog Box:	2.3950	386%
VDI Text:	0.4580	2856%
VDI graphics:	1.4150	663%

BENCHMARK

Test	Time	Ratio
GEM Dialog Box:	2.5352	365%
VDI Text:	0.4982	1888%
VDI graphics:	2.1699	432%

NBM (the Ness Benchmark)		
Test	Time	Ratio
Math routines:	16.52	99%
Memory fetch/store:	16.26	99%
Dialog box draw:	91.52	324%
Floppy drive read/write:	91.52	17%
Other drive read/write:	7.51	251%
Graphics:	11.57	407%
TOS version 1.0:	11.57	407%
Running in TOST mode:	11.57	407%

NESS BENCHMARK

NBM (the Ness Benchmark)		
Test	Time	Ratio
Math routines:	16.52	99%
Memory fetch/store:	16.26	99%
Dialog box draw:	91.52	324%
Floppy drive read/write:	91.52	17%
Other drive read/write:	7.51	251%
Graphics:	11.57	407%
TOS version 1.0:	11.57	407%
Running in TOST mode:	11.57	407%

NVDI GEM Test		
Test	Time	Ratio
Text output:	1.252	1.00
Lines:	1.252	1.00
Rectangles:	1.252	1.00
Polylines:	1.252	1.00
Circles/Ellipses:	1.252	1.00
Attribute functions:	1.252	1.00
Copy functions:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00

NVDI GEM TEST

NVDI GEM Test		
Test	Time	Ratio
Text output:	1.252	1.00
Lines:	1.252	1.00
Rectangles:	1.252	1.00
Polylines:	1.252	1.00
Circles/Ellipses:	1.252	1.00
Attribute functions:	1.252	1.00
Copy functions:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00
Clipboard:	1.252	1.00

QUICK INDEX V2.2		
Test	Time	Ratio
CPU memory:	1.00	1.00
CPU register:	1.00	1.00
CPU divide:	1.00	1.00
CPU shifts:	1.00	1.00
DMA read:	1.00	1.00
GDOS files:	1.00	1.00
Disk I/O:	1.00	1.00
Long TOS 1.2:	1.00	1.00
TOS text:	1.00	1.00
TOS string:	1.00	1.00
TOS scroll:	1.00	1.00
GEM dialog:	1.00	1.00

QUICK INDEX V2.2

QUICK INDEX V2.2		
Test	Time	Ratio
CPU memory:	1.00	1.00
CPU register:	1.00	1.00
CPU divide:	1.00	1.00
CPU shifts:	1.00	1.00
DMA read:	1.00	1.00
GDOS files:	1.00	1.00
Disk I/O:	1.00	1.00
Long TOS 1.2:	1.00	1.00
TOS text:	1.00	1.00
TOS string:	1.00	1.00
TOS scroll:	1.00	1.00
GEM dialog:	1.00	1.00

"A good sturdy product that speeds the ST up considerably, but expensive"

NAME: NVDI V2.03 (NEW VERSION IMMINENT)

COMPANY: ATARI WORKSHOP

CONTACT: 081 693 1919

PRICE: £49.95

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5 MB

SPEED ★★★★★
DOCUMENTATION ★★★★★
ADDITIONAL FACILITIES ★★★★★
VALUE FOR MONEY ★★★★★

OVERALL **86%**

FANTASTIC

**Andrew Wright looks
at an
essential
Timeworks add-on,
the bitmap font
editor and
converter, Fontkit
Plus, now at version 4**

Superb interface
Scores of usable fonts
Can convert from
various sources
Excellent Calamus
conversion option
Good global editing functions
and special effects

PROS AND CONS

Fonts limited to 54 points
in size
No conversion from
PostScript or PageStream
font formats

**"Better than ever -
the best bitmap
font editor
around"**

NAME: FONTKITPLUS v4
COMPANY: ST CLUB
CONTACT: 0602 410241

PRICE: £24.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

EASE OF USE ★★★★★
DOCUMENTATION ★★★★★
FEATURES ★★★★★
VALUE FOR MONEY ★★★★★

OVERALL **94%**

"The best just got better" is a pretty hackneyed phrase, but in the case of *Fontkit Plus*, it's actually true. *Fontkit Plus* has always been THE essential utility for users of *Timeworks* and other GDOS applications and with the release of version 4, it offers more features, an improved interface and even more ready-to-use fonts.

Fontkit Plus is essentially a bitmap font editor, but there is a lot more to it than that. Its main purpose is to import outline and bitmapped fonts in several different formats and convert them quickly and easily into fonts that are suitable for use in GDOS applications such as *Timeworks*, *Wordflair* and *Easydraw*.

The program has a powerful set of editing facilities which lets you create new fonts from scratch or tidy up those you have converted. You can also scale the fonts up or down to increase the range of point sizes that are available to your application.

It doesn't stop at GDOS fonts. You can edit ST screen fonts, downloadable printer fonts for various dot matrix printers, Canon and Star Bubblejets and Hewlett-Packard Deskjet and LaserJet printers, and fonts for *That's Write*, *Write On* and the *Signum* and *Script* word processors.

ONE PROBLEM SOLVED

If your printer can't actually download fonts into its own memory (and most don't), *Fontkit* provides a combination of utilities, *Fontprint* and *Fontswitch*, which let you emulate this facility using the ST's memory to store printer fonts. You can convert, create or edit printer fonts (or use one or more of the 38 existing ones supplied with *Fontkit*) and use them to print from text-only applications such as *First Word Plus*.

Fontkit Plus also includes *Trimfont*, a very useful utility for compressing GDOS fonts (often to under 10 per cent of their original size) and stripping out unwanted characters to conserve disk space. For floppy drive users, the benefits are incalculable, especially when used with another program, *Fontxpander*, which lets applications like *Timeworks* use the fonts in their compressed format.

Fontswitch 4 changes screen fonts and manages downloading to your printer.



INSTRUCTIONS

If all this sounds a bit complicated, you can rely on the manual to help you out. Version 4 includes a completely rewritten manual which goes to great lengths to explain the differences in font formats, how to use the various programs in the package and how to convert and edit fonts.

Version 4 is a major upgrade of *Fontkit Plus*. You can now have up to seven windows open at any one time, letting you edit and compare fonts more accurately. The maximum point size has increased, enabling users to create and edit fonts of up to 54 points at 300 dots per inch.

Other features of the program include an HP font export module, memory-resident import/export modules, a much improved user interface (including keyboard shortcuts for virtually every command), a larger paste buffer, a 10-level undo facility (very useful when working with fonts) and a dedicated file selector.

IN CONTROL

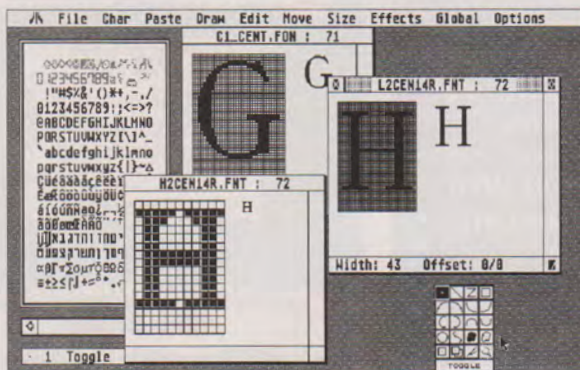
The editing tools are excellent and give the user very fine control over

individual characters and their placement within the character cell. Clicking the right mouse button brings up a small toolbox with drawing tools such as circle, square, bezier curve, magnify and fill. There are also a number of options for producing special effects to all the characters in a font at once.

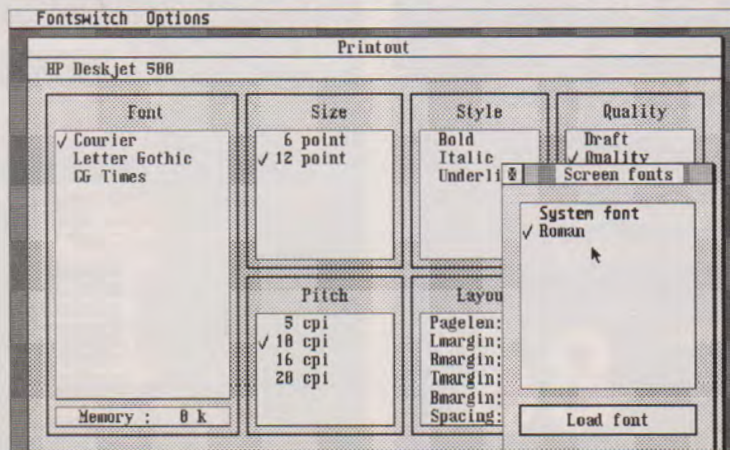
Options include outlining (much more flexible than doing it from within *Timeworks*), inlining, shade, shadow, 3D and contour.

SPECIFICATIONS

Fontkit Plus is supplied on four double-sided disks with an A5 manual in a sturdy ring binder. Two of the disks are given over to nearly 150, including two professionally designed *Calamus* fonts from Gate Seven Computers and three sets of GDOS fonts in a range of different point sizes. The Century and Century Italic fonts are particularly good and can be incorporated straight into your *Timeworks* setup. Also included are several Hewlett-Packard printer fonts, some Apple Mac screen fonts and 17 screen fonts. *Fontkit Plus 4* represents excellent value for money - if you're enjoying using *Timeworks*, you'll enjoy it a lot more with *Fontkit Plus*.



Fontkit Plus - multiple windows, good drawing tools, plenty of add-on utilities and extra fonts make it a very good value package.

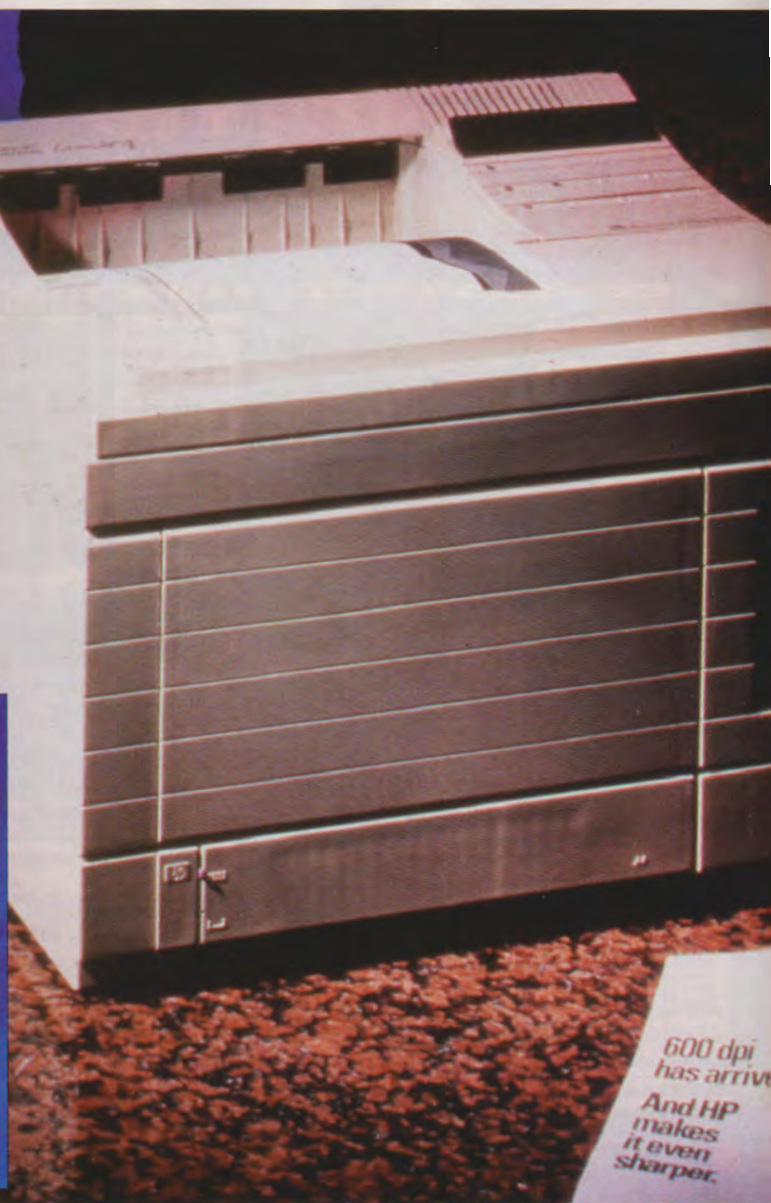


ATARI ST REVIEW ESSENTIAL BUY

The new generation of laser printers has begun to arrive in the shops, and once again Hewlett-Packard has got there first. John Mallinson takes a look at the current apple of HP's eye

Hewlett-Packard's 1989 model, the LaserJet III (below)...
...and now, the LJ4 (right), neater, better specified, and (a bit) cheaper.

DAWNING



The LJ4 is the start of a new family for Hewlett-Packard. It's the mid-range model which replaces the LaserJet III (note that for reasons best known to HP the new model is the '4' rather than the 'IV'). Expect slower and cheaper (LJIII-like), and faster and more expensive models from HP to appear over the next year. In fact, two versions have just been released – the plain LJ4, and the 4M with more internal memory (six Megabytes) and built-in PostScript emulation: we tested the first of these here.

COMPLETELY DOTTY

The most striking and exciting change is that the 'normal' laser printer resolution of 300 dots per

inch (dpi) has been upped to 600. This means that where there would have been one dot on the page there are now four, and the clarity and delicacy of the print is increased accordingly. Laser printers have always been known for clear print, but the LJ4 gives results which are noticeably cleaner and sharper. Its normal print is very difficult to distinguish from proper typeset material, and graphics come out with an almost (but not quite) photographic quality. To achieve this the LJ4 has a new printing mechanism from Canon (the EX engine), and also uses special 'microfine' toner.

If a page has four times as many dots then up to four times as much information may need to be

sent to the printer, and more memory will be needed to store each page in the printer before it's actually put down on paper.

This could have resulted in slower printing, but Hewlett-Packard has improved the efficiency of the parallel port (the connection to your computer), as well as providing more memory (two Megabytes standard), a faster internal processor (an i960 20MHz RISC chip), and improving data handling.

IN GREAT SHAPE

The LJ4 looks quite different from its predecessor. It takes up less desk space, being two inches narrower and four inches less deep, although it is two inches taller. These proportions will make it much easier to fit into a crowded office. It's also made neater by

having the main paper tray underneath, rather than sticking out at the front, and it's eight kilograms lighter than the LJIII.

There are several minor changes which make it a pleasure to use: the on/off switch is at the front rather than lurking round the back, and the control panel is on top, rather than on the front. These are minor points, but save a lot of stooping and groping.

PLAIN AND SIMPLE

The control panel itself is a model of clarity: there are eight clearly labelled buttons and a very readable display to show you what's happening. Instead of the usual dim and scarcely legible LCD strip, HP uses a vacuum-fluorescent panel which is bright enough to be read from the other side of the room (if necessary). Fiddling with



OF A NEW ERA

HEWLETT-PACKARD LASERJET 4

paper and envelopes. The LJ4 has a straighter paper path so it doesn't have this alternative; paper comes out pretty flat.

The other main features on the outside of the printer are the lift-up lid on top for putting in the toner/drum unit, a flap at the back through which you deal with paper jams, a panel on the right-hand side to get at the slots for adding extra memory chips, and a recessed door on the front, where you plug in extra font cartridges. Construction is reasonably solid.

The standard printer connections are parallel and serial ports; the 4M has a LocalTalk connector for connection to an Apple Macintosh. The parallel port is said to allow faster transfer of data than normal, and is also two-way, so that printer status messages can be flashed up on your computer screen (this feature works on a PC, but don't expect to see them on your ST). If you have several computers they can be connected to different ports on the machine and the printer will automatically switch between them as their print jobs finish.

DRIVING IT

Getting going with the LJ4 is very simple. Remove the packing, put in the drum/toner unit, load some paper, plug in your ST and you're off. Although this is different in many respects from the LJIII

models, it is entirely compatible with them, so any LaserJet printer driver will work.

One of the problems with getting such a new machine for review is that the software writers haven't yet had time to produce printer drivers which will use its features to the full. From a printer's viewpoint there are two sorts of software program: those such as word-processors that use the printer's internal fonts (e.g. **Protext** or **First Word Plus**), and those such as DTP programs (**Timeworks**, **Calamus**), graphics software, or some other word processors (**Calligrapher** for instance), which don't use the printer fonts but send the image of the page dot by dot.

In the first case the amount of data to be sent to the printer is fairly small and printing is correspondingly fast – however, the software still needs an appropriate printer driver so that it can use all the new fonts in the machine. In the second case, where dot-by-dot information is being sent, the situation is even more complicated. For a full A4 page a very large amount of information (one to two Megabytes) is being processed and transferred, and printing is usually much slower. With a properly written graphics printer driver, things can be speeded up tremendously by using data compression. This is a clever technique, a little like reducing the size of your disk files by archiving them with an ARC or LZH utility – but done 'on the fly'. The LJ4 has a new form of 'adaptive' data compression, but special printer drivers need to be written to take advantage of this.

Since dedicated drivers aren't available it isn't really possible to say how fast the LJ4 is compared to the LJIII or other printers. Straight text pages are turned out at more or less the mechanical maximum of eight per minute, but this is the same as on the LJIII. For graphics data it should be faster, but time will tell. Various software companies that we have spoken to are producing LJ4 drivers for the ST, so by the time you read this the situation should have changed.

PICTURE THIS

With text you'll see increased clarity, especially for small type sizes. In fact, even using 300dpi drivers the results from the LJ4

Courier
CG Times
CG Times Bold
CG Times Italic
CG Times Bold Italic
CG Omega
CG Omega Bold
CG Omega Italic
CG Omega Bold Italic
Coronet
Clarendon Condensed
Univers Medium
Univers Bold
Univers Medium Italic
Univers Bold Italic
Univers Medium Condensed
Univers Bold Condensed
Univers Medium Condensed Italic
Univers Bold Condensed Italic
Antique Olive
Antique Olive Bold
Antique Olive Italic
Garamond Antiqua
Garamond Halbfett
Garamond Kursiv
Garamond Kursiv Halbfett
Marigold

Albertus Medium
Albertus Extra Bold
Arial
Arial Bold
Arial Italic
Arial Bold Italic
Times New
Times New Bold
Times New Italic
Times New Bold Italic
ABXΔEφγηιρΤτ×δ+φω|3#3
Symbol
8869027522KerOO
Wingdings
Courier Bold
Courier Italic
Courier Bold Italic
Letter Gothic
Letter Gothic Bold
Letter Gothic Italic

Feel the quality – 15 fonts for all seasons built into the LJ4.

FONTS

If you fancy a printer with a large collection of internal fonts, then the LJ4 is for you. The LJIII was fairly typical of its price and time in having four (Courier, Line Printer, Times, Univers). The LJ4 has 15. There are the usual Courier and Line Printer, and then there is a collection of serif fonts (Clarendon, Garamond, Omega, Times, Times New), four sans-serifs (Albertus, Antique Olive, Arial, Univers), two scripts (Coronet and Marigold), a Symbols font and Dingbats. Most are also available in bold, italic and bold-italic versions, and most can be scaled to any size between 0.25 (!) and 999.25 points. They look good and the extra resolution of the printer makes the more complicated faces such as the scripts very clear indeed.

the various printer settings from the control panel is much easier than on other machines I've used, largely because you can actually see what you are doing.

The paper tray holds 250 sheets, and there is a gauge to show you roughly how full it is; another 500 sheet tray is available as an extra. Less convenient is the second paper/envelope feeder which flops down at the front (rather like that on the IIIP). This is only for occasional use (though it can hold 100 sheets) and there's a rather awkward pull-out extension to the flap which always jammed when I tried to slide it back in again. A black mark here.

Paper comes out face-down on top of the machine. Many laser printers have a second straight-through paper exit because of their tendency to buckle thicker



Far left: Obvious coarse dithering at 300dpi. Left: Nearly photographic quality from the LJ4 at 600dpi.
© Hewlett-Packard

are quite superior - this is because of the new finer toner powder and the fact that even at 300dpi the dots are smaller. But the biggest difference becomes visible when printing graphics.

Consider a photo which has a range of tones from white to black with lots of different greys in between. Can a laser printer produce anything similar? The problem is that a laser printer can't print grey - only black dots of varying sizes (or none). When a laser tries to print a grey area a process of 'dithering' is used.

This means that different patterns of black and white dots are used to simulate grey - the closer the dots in the pattern, the darker will it appear.

If you've looked at graphics printouts from 300dpi lasers (or inkjets or dot matrix printers) you will have seen this effect: instead of uniform shades of grey, you have different patterns - scarcely photo-realism. At 600dpi these dither patterns are finer and the whole appearance is very much more life-like.

The print resolution of the LJ4 is effectively 600 x 1200dpi because of the Resolution Enhancement technique that is used. This is a way of smoothing the edges of characters or images by varying the dot size; HP first introduced it in the LJIII. The LJ4 is an impressive graphics printer but we are still a long way from having true photographic quality on our desktops - for that you need something which prints at more like 2400dpi!

KINDER TO THE NOSE

Last but not least amongst all these new features is that the LJ4 doesn't smell. Lasers smell? Certainly. Very high voltages are used to produce the electrical charges which stick the toner onto the drum, and then onto the paper. Oxygen gets split to ozone, and the LJIII (and many other lasers) certainly emits a whiff of this nasty pungent stuff every so often. The new Canon EX engine uses a different system and is almost entirely ozone-free. You can breathe freely at last.

THE COMPETITION

What are the alternatives to this superb machine? At the moment none, as there is nothing comparable at the price. Canon has just announced the LBP-8 IV which will cost about the same and have a similar range of features, and this should be available shortly.

In our October laser printer round-up the Ricoh LP1200 came out as a best buy and was the only reasonably-priced printer then capable of more than 300dpi. It will cost you £350 less than the LJ4, but has 400dpi as opposed to 600dpi, fewer fonts and is generally less sophisticated - having said that, though, it's still excellent value for money.

With the LaserJet 4 HP has again shown that it leads and the others follow - though why the others are happy to do so remains a mystery. This is an evolutionary rather than a revolutionary machine, but it is obviously going to give a standard for other manufacturers to compete against - until, that is, the LaserJet 5 comes along in three years or so.

THE FUTURE

The new 600dpi standard (and it will inevitably become standard for mid-price laser printers) will have a lot of effects on the printer market generally in the next year or so. The most significant of these are likely to be:

- Lots of new 600dpi lasers will appear, some cheaper than the LJ4.
- 300dpi four pages-a-minute lasers won't disappear but will drop in price probably to £3-400. There will then be two laser standards (as in the dot matrix printer market with 9 and 24 pin printers).
- You should see a lot of cheap, good, second-hand lasers in the columns of computer mags, Loot, and Exchange & Mart as people upgrade (anyone want to buy mine?).
- As laser prices fall, inkjets (the next down the price scale) will become still cheaper.
- Dot matrix printers will all but disappear, apart from a few very cheap ones, and some very expensive specialised ones.
- Affordable colours lasers? That will be the day.

BUYERS GUIDE

	LASERJET 4	LASERJET III
RRP	£1,649	£1,700
STREET PRICE	£1,174	£1,210
SIZE	30x42x40 CM	25x46x50 CM
WEIGHT	16.8 KG	25
MEMORY	2 MB	1MB
PROCESSOR	INTEL 20 MHz 80960 KA	MOTOROLA 16MHz 68000
SPEED	8 PPM	8 PPM
FONT FAMILIES	15	4
SCALABLE	14	2
RESOLUTION	600 dpi	300 dpi
RESOLUTION ENHANCEMENT	*	*
PAPER CAPACITY	250 + 100 SHEETS	150 SHEETS

"Superb range of fonts, excellent print, good price"

NAME: HP LASERJET 4

COMPANY: HEWLETT
PACKARD

CONTACT: 0344 369369

PRICE: STANDARD

VERSION £1,649

POSTSCRIPT VERSION
£2,249

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5 MB

EASE OF USE ★★★★★

DOCUMENTATION ★★★★★

CONSTRUCTION ★★★★★

PRINT QUALITY ★★★★★

OVERALL **94%**



HCS

MEMORY UPGRADES

HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the novice. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040	£13.99
To 2 Megabytes.....	£49.99
To 4 Megabytes.....	£94.99

STF (M) and Mega ST upgrade kits

Xtraram Deluxe plug in upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb* and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradeable.

MARPET XTRARAM <i>Deluxe</i> QUALITY SIMM UPGRADING SYSTEM	
<i>Formerly Frontier</i>	
Upgrade from 520 to 1040	£44.99
To 2.5 Megabytes.....	£79.99
To 4 Megabytes.....	£119.99

Solder in Kit

The solder in kit will upgrade the 520ST to 1Mb. Electronics experience is required as much soldering is needed. Check your RAM chip configuration before ordering: 4 or 16 chips, SMD or DIL.

Solder in kit (all versions)	£25.00
------------------------------------	--------

REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply	£39.95
Double sided disk drive kit	£47.00

ACCELERATORS

The AD speed made by ICD fits in place of your microprocessor. It uses a 68000 chip running at a switchable 16Mhz with cache or standard 8Mhz to give virtually 100% compatibility. The 68030 SST for the Mega ST gives phenomenal speed with a 68030 running at 50Mhz! The SST has space for 8Mb on board RAM, TOS2 included.

AD Speed ST	£145.00
AD Speed STE.....	£165.00
68030 SST - 50	£550.00
Fitting for above	£35.00

INTERFACES

The "AdSCSI" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date, with cartridge-through port.

Keyboard interface allows the use of external PC compatible keyboards on the ST.

AD SCSI.....	£69.99
AD SCSI Plus (with clock)	£79.99
Keyboard Interface	£55.00
Multirez	£44.99
Forget Me Clock.....	£16.99

SAME DAY REPAIRS IN LONDON

SAME DAY FITTING AND REPAIRS TO COMPUTERS AND MONITORS. REPAIRS FROM £29.99

- * We offer a discount fitting service when your upgrade is purchased from us!
- * Most repairs have same day turnaround on a booking system
- * Repair charge includes labour and smaller items of repair
- * Ask for a TOS 1.4 upgrade at the same time as your repair for only £25.00
- * All repairs carry 90 day warranty

GEARED
TOWARDS
MUSICIANS

ATARI MEMORY UPGRADE SPECIALISTS

MONITORS

14" Super high resolution 0.28mm dot pitch monitor is compatible with TT, PC, Falcon and Multirez. The new HCS MM140 Monochrome monitor has tilt/swivel base and 14" tube. Fully compatible with all monochrome ST software.

Multisync colour monitor	£280.00
SM144 14" FST Monochrome.....	£115.00

MODEMS

HCS Smart Modem 9600 has full FAX capability for send and receive. Auto-answer, pulse or tone dial, automatically determines incoming calls as fax or modem, industry standard command set with support for V22bis, V22, V21. Fully Hayes compatible. All types c/w PC software. ST fax software option supports most ST graphics formats including Pagestream and Calamus for immediate composition and send. Modem 2400 has all above features but without fax. Smart One14400 comes with MNP level 1-5 and Fax capability. Using V42 bis gives a maximum effective throughput of 58000bps!!! All types come complete with cables.

Smart One™ 2400	£59.99
Straight Fax software.....	£45.00
Smart One™ Fax with ST FAX software	£139.99
Smart One™ Fax with only PC software	£119.99
Smart One™ 14400 Fax MNP V32,V32bis, V42,V42bis etc	£249.99

PROTAR HARD DRIVES

Progate II 40	£288.88
Progate II 40DC	£349.99
Progate II 50DC	£349.00
Progate II 120DC	£469.00

The Vortex 386 emulator runs at 16Mhz and allows true multitasking in PC mode on the ST. Space on board is provided for a 387 CO Processor and 512K of FASTRAM. Norton factor 15!

VORTEX 386 SX-16	£330.00
387 CO-PROCESSOR	£117.00
FASTRAM CACHE	£30.00

SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms).....	£300.00
-----------------------------------	---------

Atari TT2	£1050.00
-----------------	----------

HOW TO ORDER

Enquiries and credit card orders please

Fax/Call on (071) 252 3113

Please phone with enquiries between

Mon - Fri 9.30am to 5.30pm. Sat 10.30am to 2.00pm

Enquiries cannot be taken by post.

For mail order please send description of goods and cheque/PO to:

HCS

Dept 10, 144 Tanner Street
London SE1

Prices include VAT and P & P

Goods normally dispatched within 2 working days.



E & OE

5
YEAR
GUARANTEE
ON
MEMORY

Marpet No1 distributor,
Exclusive Best Data UK
distributor, Exclusive
Joppa Software UK
distributor, Gadgets UK
distributor.

14
DAY
NO QUIBBLE
MONEY BACK
GUARANTEE

WORKSHOP ADDRESS

HCS ENGINEERING, 144 Tanner Street, London SE1
REPAIRS AND SERVICE telephone number NOT MAIL ORDER: 071-252 3553
Fax: 071-252 1551

A LOAD OF

Upgrading TOS is a matter of changing chips in the STE, but in an STFM, it's a little more complicated. Tony Kaye visited Analogic Computers to have one fitted. Here's how it's done...



Since Atari improved the early desktops with TOS 1.04, people have been buying sets of chips so that they can take advantage of the new features. For the first time, Atari has recognised this need and, with the first really new version of TOS, 2.06, has authorised the upgrade itself.

TOS 2.06 is the operating system found in the Mega STEs and has many desirable features. The ability to drag items onto the desktop is one bonus that *Neodesk* users have had for years.

It's useful, especially for hard disk owners to do this, as it saves searching through partitions and numerous folders to run a program. Other features include new icons, key alternatives to major commands, a No Sort file option, a search option, high-density disk formatting, making this the most extensive upgrade for a long time.

We went to Analogic Computers in Kingston to see how the upgrade is fitted. In the hands of a professional, the job looks easy, but it does involve soldering on to the 68000 CPU (the main processor chip in the ST), the GLUE chip and other places on the motherboard, so if you are not totally convinced of your own ability with a soldering iron, it's advisable you to have the upgrade fitted by someone who is.

FITTING THE UPGRADE

We took a 520 STFM that was destined to be upgraded with four Megabytes of memory and a Blitter chip as well as the TOS upgrade. The step-by-step guide takes you through all of the stages to fit the decoder to the mother-

board. As you will see here, it's not a job for the faint-hearted: it involves stripping the ST down to the main board and removing it from the casing.

Once the casing is off, turn the ST over and locate the required pins. It is recommended that you put a small piece of insulating tape on the board before placing the decoder. This will reduce any possibilities of the board shorting out. Locating the pins, solder the decoder in place under the main 68000 chip. The pin numbers have been shown in the guide. Once the decoder is in place, the next step is to solder the new TOS ROM sockets in place. Early STs have the TOS on six ROMs and the later ones have two.

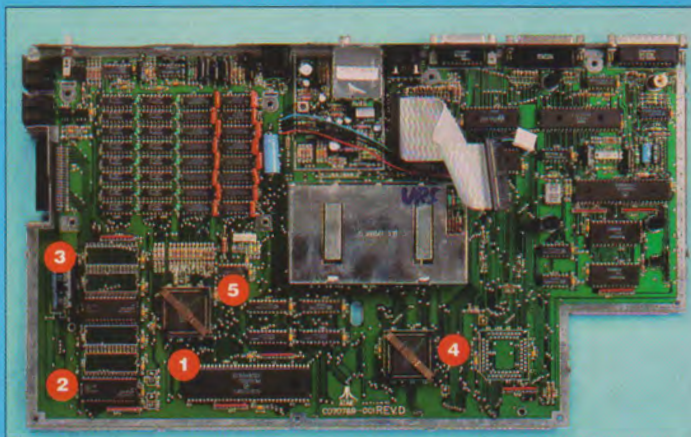
This leaves space to solder the new sockets. Select one marked high and its opposite number and insert the sockets into the board. Note that a blue substance comes off the board, which must be brushed off before attempting to solder the sockets.

Once these have been put in place, the remaining wires can be soldered and the chips placed in their respective sockets, then the computer can be reassembled.

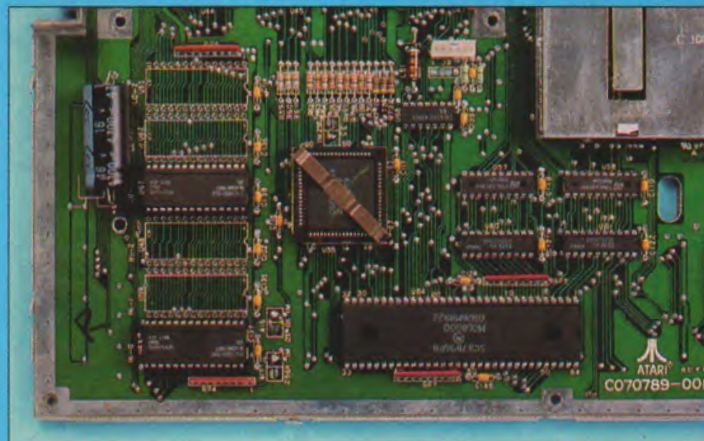
Thanks to Analogic Computers for their help in compiling this guide. They can be contacted on 081 546 9575.

ST Review can accept no responsibility for any damage caused to STs by individuals carrying out this upgrade.

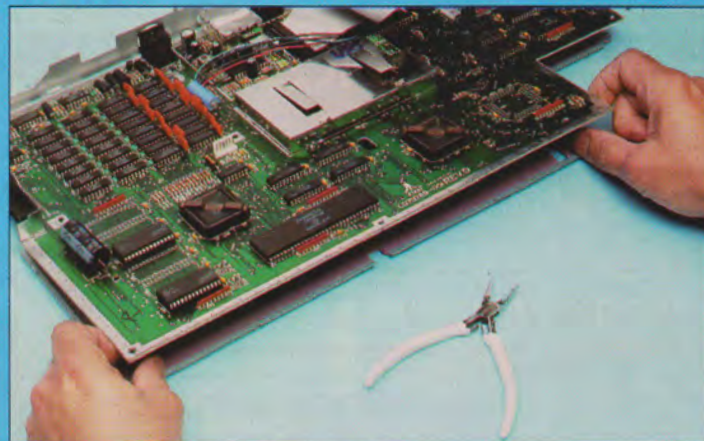
STEP BY STEP



1. 68000 Main processor chip. 2. Existing TOS1.02 chips. 3. Spare slots used for new TOS. 4. MMU chip. 5. Glue chip.

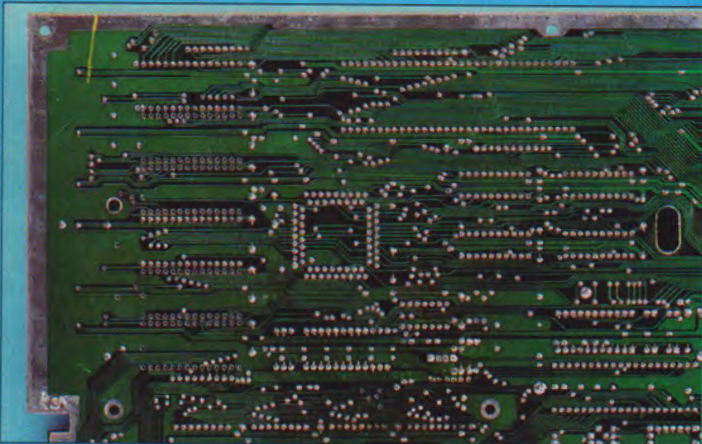


2. Remove the case, disk drive and power supply to reveal the motherboard as in the top picture. Then identify the 68000 processor, the GLUE chip, the existing TOS and the slots to be used for the upgrade.

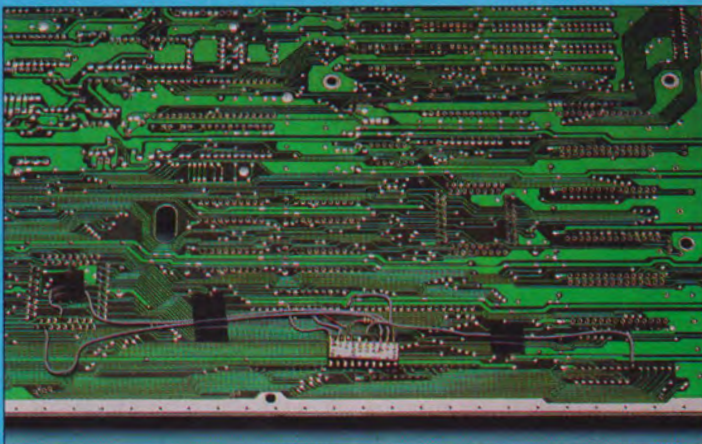


3. Carefully remove the motherboard from the base screen. Hold the board at the corners and push up with your fingers whilst holding the screen with your thumb.

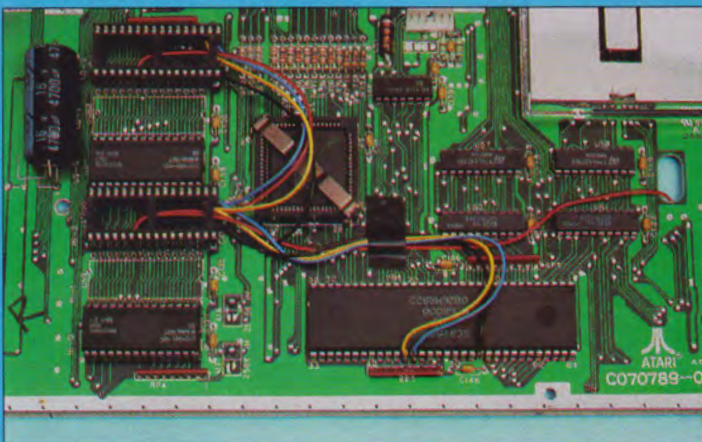
NEW TOS!



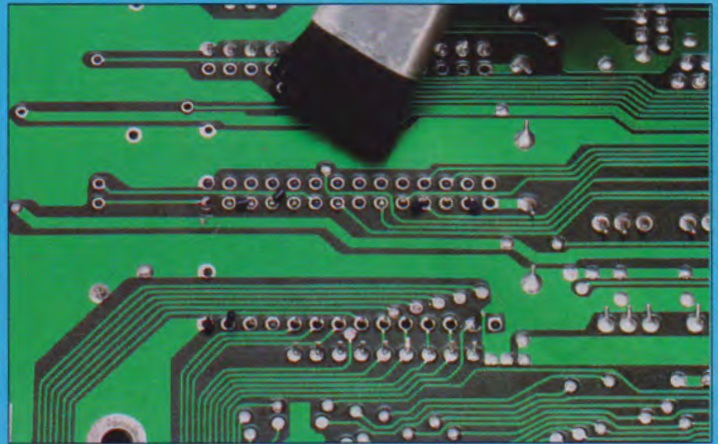
4 Turn the board over and identify the 68000 from the back. Place a piece of insulating tape directly on the board under where the upgrade will go. This will reduce prevent it shorting out against any existing solder joints.



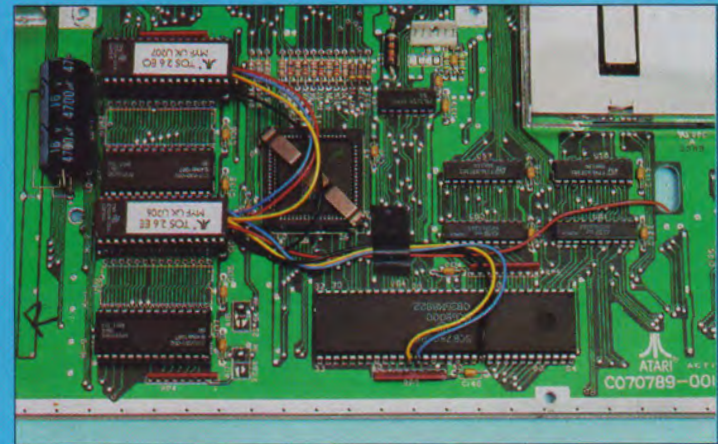
5 Marry up the correct pin numbers and solder the upgrade board to the pins under the 68000. Run the leads carefully so that there is no chance of them becoming frayed or pierced by the solder joints already there.



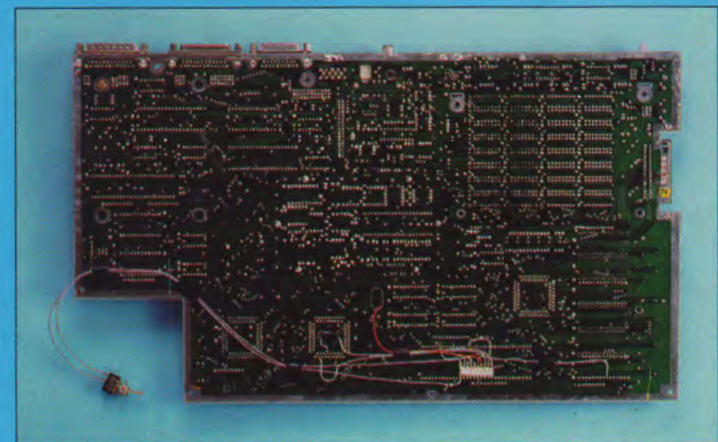
6 Place the new sockets in position. The sockets are in matched pairs and are marked high and low, so make sure that you use a matching pair.



7 When you push the sockets into the board, small blue deposits appear on the back of the board. It is vital that you use a soft brush and remove all traces of this before soldering the sockets in place. The blue is just a residue from the board manufacture.

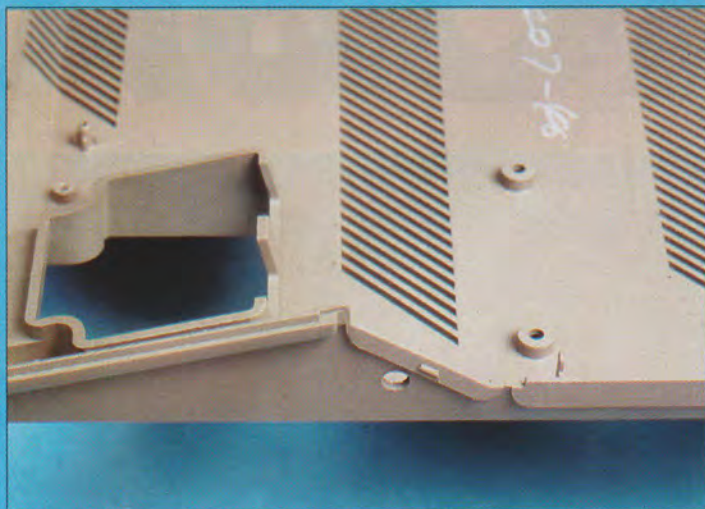


8 Once the soldering is completed, insert the new TOS ROMs. Make sure that they are the right way around.

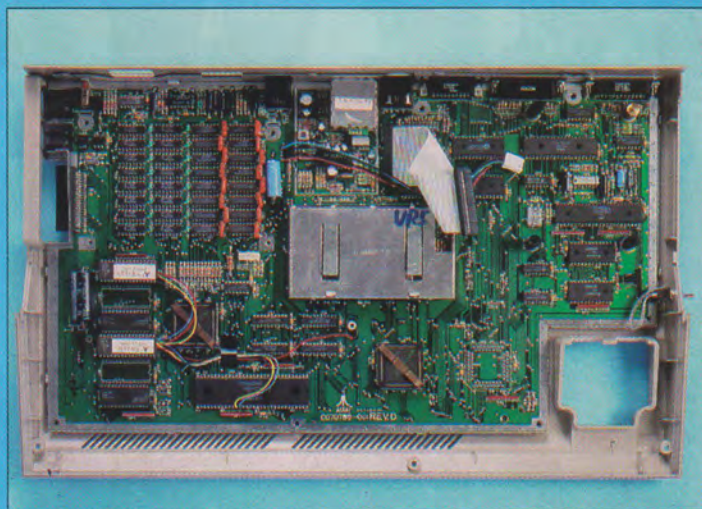


9 Connect the switch to the upgrade and run it to the side of the ST. Again, you need to make sure that the leads run clear of any obstructions.

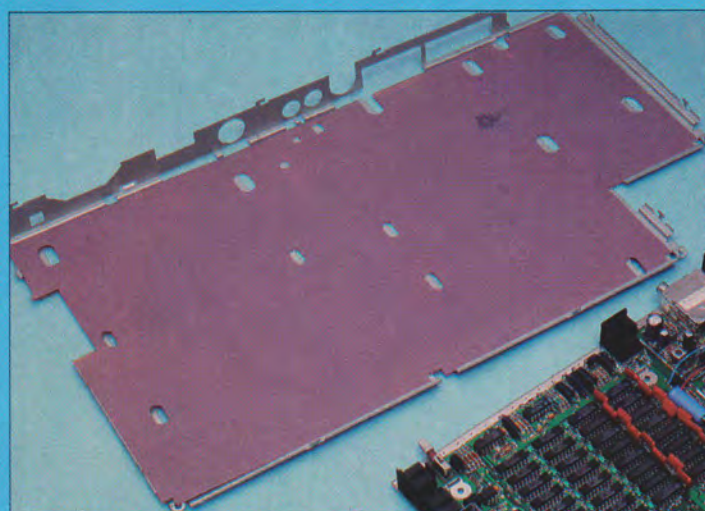
STEP BY STEP



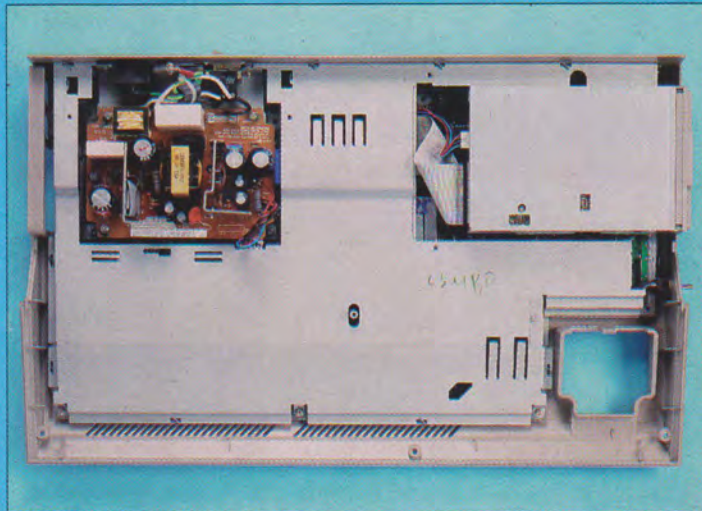
10 Drill a hole in the case of the ST for the switch. The diameter for this should be six millimetres.



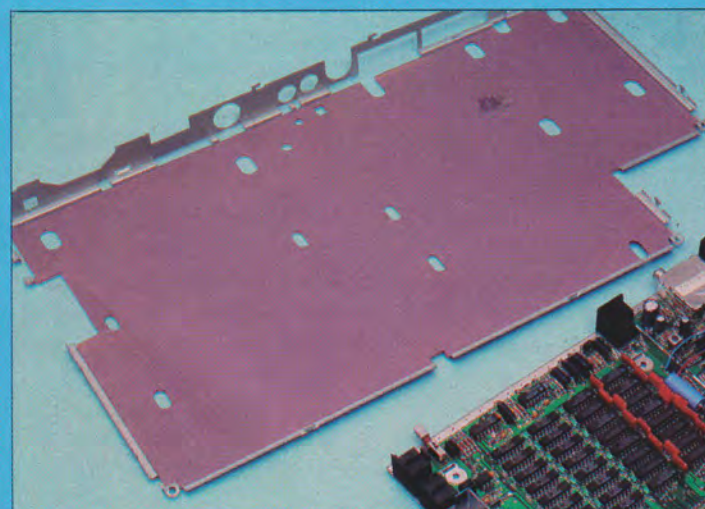
13 Replace the motherboard and run the switch to the hole you drilled previously. Tighten the nut around the switch with pliers.



11 When you replace the board, make sure that the card in the base is seated correctly, otherwise the holes will not match up. This is wrong...



14 Using tin snips, remove some of the screen around the switch position. By thinking it through, you can see the easiest places to cut and you will remove about five or six inches of screen.



12 ...and this is correct. Note the difference. It may seem obvious, but it's an easy mistake to make. As it's at the bottom, it's a lot to take apart to correct!



15 When the power supply, drive and keyboard are replaced, it looks just like any other ST, but it has a secret. Connect all of the leads, place the switching software in the drive and switch on. You now have the choice of TOS 1.02 or 2.06.

STEP FORWARD

into the world
microdeal
music

SAMPLERS & SEQUENCERS EXPLAINED

SAMPLE: A sound that has been loaded into a computer and is represented by numbers (digital) rather than noises (analogue).

SAMPLER: Usually a small cartridge that allows you to take sounds from a microphone (with amplification), tape, CD etc and record (digitize) them into your computer's memory. Once in the memory a sample (sound) can be changed using the sampling software.

SAMPLING SOFTWARE: Allows you to alter sounds that have been digitized by the SAMPLER. Normal functions with sampling software include loading and saving a sample disk, altering the sample by cutting, speeding up/down, fading in/out, joining to other samples and much much more.

SEQUENCER: A sequencer takes musical notes and then allows you to play them back in an order (Sequence) that you determine. Microdeal make two types of sequencer, **QUARTET** is a sample sequencer and plays back samples out of the computer. **CONCERTO** is a Midi sequencer that plays back musical notes using any Midi Instrument.

STEREO REPLAY

Our top Stereo sampler plugs into the cartridge port on the side of the Atari and has both Input and Output sockets to allow you to record Stereo sound into the ST and then play back in high quality through an amplifier. The software includes a full featured editor that allows you to tailor samples plus a STEREO BEAT program which is a 3 channel drum sequencer. The software also includes a 3D display program to allow you to see the digital structures of a sample. REPLAY STEREO will also load 12 and 16 Bit samples and save them as 8 Bit in either Stereo or Mono. The package also includes routines to play back samples in Hi-Soft, GFA & STOS basic.

SAMPLER, SAMPLING SOFTWARE & MANUAL £89.95

QUARTET

This sophisticated sequencer allows you to take samples and sequence them into music. Imagine your samples as a band with **QUARTET** as the conductor, your band is composed of 20 instruments of which 4 can play at any one time. **QUARTET** comes with 100 instruments and sounds for inclusion in your own compositions and further sounds can be added using **STEREO REPLAY** and **STEREO MASTER** or other samplers. The music is represented as notes on a staff and can be input by the mouse or if you have a synthesiser keyboard with a Midi out socket by playing on the keyboard. Control of the music includes Tempo, Pitch and **QUARTET**'s digital processing software (**DIGITAL.PRG**) allows you to change the pitch size and volume of individual samples. Who knows you could easily be tomorrow's "Adamski" or "Mozart" with this highly acclaimed package.

stereo MASTER

Our new stereo sampler is low in price but high in features. the new style mini cartridge plugs into the cartridge port on the side of your Atari and even includes a lead with mini jack for immediate connection to your walkman or headphone socket on your amplifier. Once connected you can load stereo sounds, edit them, analyse them, and even change real time sounds by adding special effects to the output such as echo, pitch up, pitch down, and more. we even include midi support so if you have a Midi keyboard you can playback different samples from mapped out areas of the keyboard. Output from **STEREO MASTER** is via the speaker on your TV or monitor or if you have an STE you can connect up the hi-fi ports to an amplifier for high quality output.

SAMPLER, SAMPLING SOFTWARE & MANUAL £39.95

CONCERTO

Our powerful but friendly Midi sequencer allows you to compose and arrange any type of music from Classical to Rock, Pop New Age and Jazz. Use it with any Midi instrument and record up to 24 tracks and assign them to 100 patterns. Link the patterns together to form a complete song. Five different editors **SCORE**, **STEP TIME**, **GRID**, **DRUM** & **EVENT** give you features only included in sequencers which presently cost ten times as much. Tape deck style controls make recording and playback easy and the mixing desk allows you to add five effects to your song including tempo, pitch bend and control changes. You can "ride the faders" mixing the volumes of each track just like a mixing desk in a recording studio. If you are a STE or TT owner you can even sequence samples into your songs. All in all, the main song **CONCERTO** sings is that it's amazing value for money.

MIDI SEQUENCING SOFTWARE & MANUAL £39.95

WORLD OF MUSIC ORDER FORM

PLEASE SEND ME	QTY	PRICE EACH	TOTAL
STEREO REPLAY		£89.95	
QUARTET		£49.95	
STEREO MASTER		£39.95	
CONCERTO		£39.95	
POST & PACKING		£1.00	

GRAND TOTAL
ENCLOSED

TO ORDER: Simply phone 0726 68020 with your credit card number or fill out this coupon and send together with your cheque /postal order or credit card number to:

MICRODEAL LTD, PO BOX 68, ST AUSTELL, CORNWALL. PL25 4YB

NAME:

ADDRESS:

.....**POSTCODE:**

CREDIT CARD NO:

EXPIRY DATE:

...../199.....

Microdeal products are available from your local computer shop or direct from Microdeal. **Already own a Microdeal Sampler and want to upgrade? Phone 0726 68020 for details.**

Seikosha has released a new entry-level 24-pin dot matrix printer, the SL-90. It has a price tag of under £200, but does a low price mean less quality? Tony Kaye investigates...

PIN MO

Recently, our cover disks have included word processors, desktop publishing and art packages. To take full advantage of these programs, you need a printer. DTP and word processing are a lost art if you can't have a hard copy of your work. So, you've decided to buy a printer, but which one?

You've bought all the magazines with printer reviews, bothered the guy in your local High Street dealer and even made a few 'phone calls to get advice. The jar that you have saved all of those 10 pence pieces has to be used



because they've brought a new coin out and they won't accept yours soon. Still you can't decide what to spend your hard-earned money on. You'd love a laser, but the jar's not big enough. Anyway, you really couldn't quite justify buying one, so you've settled for a 9-pin at around £200.

But wait! What's this? A 24-pin printer for the same money? The print quality will be better and the machine will be faster. Hold on, where's the catch?

There isn't one. The new Seikosha SL-90 24-pin dot matrix printer has a retail price of £199. It slots right in at entry level and should steal quite a lot of business from the 9-pin brigade.

SPECIFICATIONS

The SL-90 boasts a print speed of up to 240 characters per second, two resident fonts plus seven more as an option, Epson LQ emulation and tractor feed and a single sheet feeder as standard.

One thing that is nice to see is the power switch on the front of the printer. For some reason, manufacturers of hardware seem to think that we all have elastic arms and don't mind reaching round the back and wading through all of the wiring and paper feeds just to switch the darn thing on or off! Full marks to Seikosha for locating the power switch on the front of the unit, making this task simple.

Paper feeding is fairly easy too, although the clips that hold the

Good price
Fast, good quality printing

PROS AND CONS

Awkward single sheet feed
Flimsy tractor feed clips

"A good entry level printer that should take some sales away from the 9-pin models"

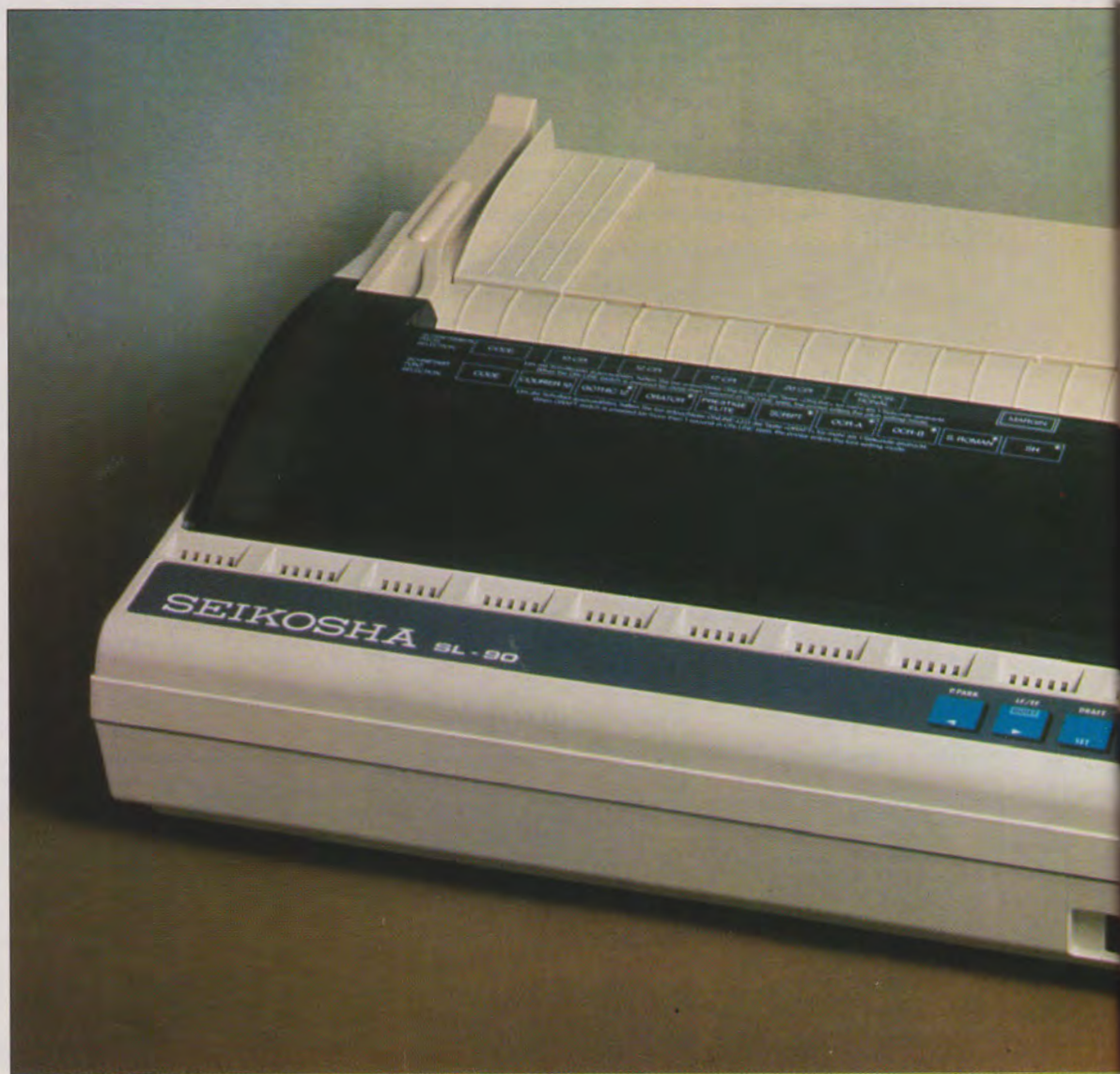
NAME: SEIKOSHA SL-90
COMPANY: SEIKOSHA
CONTACT: 0753 685873
PRICE: £199

CUT SHEET FEEDER: £75
BLACK FABRIC RIBBON : £5.90
FONT ROM £22

DESIGN	☆☆☆☆☆
CONSTRUCTION	☆☆☆☆☆
EASE OF USE	☆☆☆☆☆
PRINT QUALITY	☆☆☆☆☆
SPEED	☆☆☆☆☆
FEATURES	☆☆☆☆☆
INSTRUCTIONS	☆☆☆☆☆
VALUE FOR MONEY	☆☆☆☆☆

OVERALL
82%

The new SL-90 from Seikosha: 24-pin printing at a 9-pin price.



Exactly how many awards
will it take before
you own a copy of
Sid Meier's Civilization?

Dip switches are in the space under the print head. It is accessed by pushing the head to one side and removing the cover to reveal the switches under-



Best Consumer Product 1991

Winner!

Best Strategy Program 1991

Winner!

Best Entertainment Program 1991

Winner!

Most Original Game 1992

For your
ATARI ST

Also available for Amiga and IBM PC Compatibles

MicroProse Ltd. Unit 1 Hampton Road Industrial Estate Tetbury Glos.
GL8 8LD. Tel 0666 504 326.

If you only print the occasional letter to ST Review or Auntie Flo in Brighton, then you could do a lot worse than invest in the SL-90. Beware of the tractor clips, though. They are likely to break if you're not careful.

Would you buy the world for your ST if it didn't cost the Earth? Well now you can with ST

Review's offers you have the lowest prices anywhere for high quality memory upgrades that will unleash the power of your ST.

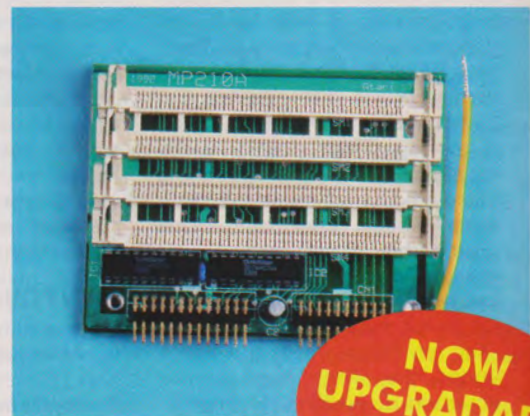
POWER TO INCREASE YOUR

ST Review wants everyone with a 520 STE and STFM to upgrade to the wonderful world of 1 Megabyte computing. So much so that we are now offering the cheapest upgrades in Britain!!

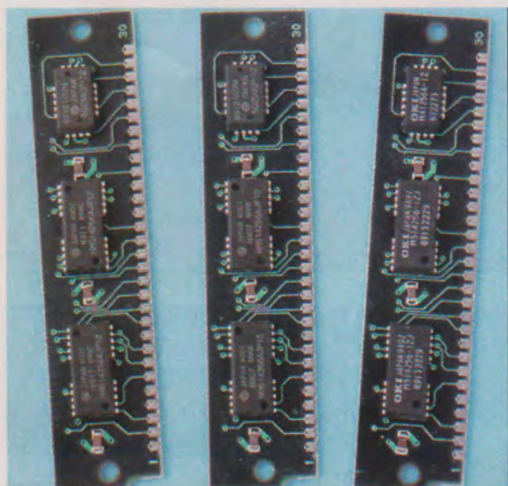
STFM 1 Meg upgrade only £34.99

STE 1 Meg upgrade only £9.99

Nothing extra to pay! For less than the price of a good game and a old mouse mat, you could upgrade your 520 STFM to a whole Megabyte and be able to run all the latest 1 Meg only games and utilities. As you can see the board has now been unrated to make it expandable to 4 Megs. Each board comes complete with SIMMs chips to take you up to 1 Meg, full fitting instructions and free after-sales technical support.



1 MEGABYTE UPGRADES FROM £9.99!



TIME FOR A CHANGE A PLUG-IN AND GO REAL TIME CLOCK!

Tired of hunting for your files? ST Review's exclusive Clock Cartridge will save you hours of searching by date stamping all your files! Ideal for organising all your DTP and WP files.

All Atari's machines since the ST have had real time clocks to satisfy the demands of computer professionals. Isn't it time you had the same benefits?

There are two clock cartridges available - one offers the

advantage of a through port for people who already use their cartridge port.



CUSTOMER CARE

At ST Review, every care is taken with our readers' offers to bring the highest quality products to you at the very lowest price. We don't deal in anything we can get our hands on - we carefully select products that are high quality, low-priced and offer the best back-up.

THE ST REVIEW GUARANTEE OF VALUE CONTINUES WITH THE LOWEST PRICES AVAILABLE IN ANY ST MAGAZINE!

THE PUNTER!

MEMORY!!



AFTER SALES TECHNICAL ENQUIRIES

STE MEMORY UPGRADES

0733 63999

STFM 0423 712600

STFM 1 Meg memory upgrade	£34.99
STE 1 Meg upgrade	£ 9.99
TIME CARTRIDGE	£12.99
TIME CARTRIDGE WITH THROUGH PORT	£15.99
MOUSE	£ 9.99

TOTAL £

Method of payment

- ☐ Cheque
- ☐ Postal Order
- ☐ Visa / Mastercard

Name.....

Address.....

Postcode.....Telephone (day).....

Visa / Access / Mastercard No.....

Expiry date:

Signature:.....

VISA AND MASTERCARD TELEPHONE ORDERS

0733 63999

**ORDER BY
TELEPHONE
NOW!**

PAYING BY CHEQUE and POSTAL ORDERS

If you pay by cheque or Postal Order make all orders payable to GO DIRECT and mark cheques with your cheque guarantee number on the reverse.

All prices quoted are inclusive of VAT and include free after-sales technical helpline on all memory upgrades.

Please allow up to 28 days for delivery. Send your completed forms to ST REVIEW READER OFFERS, 30-32 Farringdon Lane, London EC1R 3AU.

NICE MICE!

**THE BEST REPLACEMENT MOUSE AVAILABLE
FOR YOUR ST FOR ONLY £9.99!**

If your Atari mouse has grown weary of life, why not upgrade with an ST Review plastic pal? Our mouse has high quality micro-switched buttons, a resolution of 280 dpi and glides more smoothly than Lionel Blair in baby oil. It can even be switched to work with an Amiga if you have a games computer.

**THE IDEAL
CHRISTMAS
GIFT FOR
YOUR ST**

NON-RECEIPT OF GOODS

For non-receipt of goods featured on this page please phone 0733 63999.

Offers are only open to UK residents.

Fulfilment: Go Direct, Thurston House, 80 Lincoln Rd, Peterborough PE1 2SN.

AMAZING PRICES FOR ATARI USERS

GAME	£ PRICE	GAME	£ PRICE	GAME	£ PRICE
2-Hot 2-Handle (Comp)	20.95	Elvira - Arcade Game	17.95	Lemmings (Original)	17.95
3D Construction Kit	25.85	Elvira II	23.95	Lemmings 2	17.95
3D Construction Kit 2	33.95	Emlyn Hughes Int. Soccer	7.95	Lemmings Double Pack	20.95
4 Wheel Drive (Comp)	20.95	Epic	20.95	Lemmings Levels (add-on version)	13.95
Action Masters (Comp)	20.95	Espana - The Games '92	20.95	Lemmings Levels (stand alone)	17.95
Addams Family	17.95	Euro Football Champ	17.95	Leonardo	6.96
ADI English (11-12)	17.95	European Championships 1992	17.95	Lineker Collection	13.95
ADI English (12-13)	17.95	Exile	17.95	Liverpool Football	17.95
ADI English (13-14)	17.95	F-15 Strike Eagle II	23.95	Lombard RAC Rally	6.96
ADI French (13-14)	17.95	F-16 Combat Pilot	7.95	Lotus Esprit Turbo Challenge	7.95
ADI Maths (11-12)	17.95	F-19 Stealth Fighter	20.95	Lotus III - The Ultimate Challenge	17.95
ADI Maths (12-13)	17.95	F-29 Retaliator	17.95	Lotus Turbo Challenge II	17.95
ADI Maths (13-14)	17.95	Falcon	11.95	Lure of the Temptress (1Mb)	20.95
Advanced Destroyer Sim	7.95	Falcon - Counterstrike Data Disk	7.95	M1 Tank Platoon	20.95
Advanced Fruit Machine	5.95	Falcon - Firefight Data Disk	7.95	Magic Maths (4-8)	19.95
Advantage Tennis	17.95	Falstic Worlds (comp)	23.95	Magic Pockets	17.95
After Burner	6.96	Fantasy World Dizzy	6.96	Magic Storybook	20.95
Agony	17.95	Fascination	20.95	Magic Worlds	17.95
Air Sea Supremacy (Comp)	20.95	Fast Food	5.95	Magicaland Dizzy	6.96
Air Support	20.95	Final Blow	17.95	Magnetic Scrolls Collection	20.95
Alcatraz	17.95	Final Command	6.96	Manchester United	7.95
Amberstar (1Mb)	20.95	Fire and Ice	17.95	Manchester United Europe	17.95
Ancient Games	6.96	Fire Force	17.95	Match of the Day	17.95
Another World	17.95	First Letters (under 5's)	6.96	Maths Dragon	10.95
Answer Back Junior Quiz (6-11)	15.99	Fists of Fury (Comp) (Not STE)	15.85	Maths Mania (8-12)	19.95
Answer Back Senior Quiz (12-AD)	15.99	Flight of The Intruder	12.95	Maupiti Island	20.95
Aquatic Games	17.95	Flight Simulator 2	23.95	Max (Comp)	20.95
Archer Macleans Pool	17.95	Flimbo's Quest	7.95	Mega Sports	17.95
Armour Geddon	17.95	Flood	8.95	Mega Twins	17.95
Award Winners (Comp)	17.95	Football Crazy (Comp)	17.95	Mega-Lot-Mania/First Samurai	20.95
Ball Game	6.96	Formula 1 Grand Prix	23.95	Mercs	17.95
Barbarian II (Budget)	6.96	Fraction Gobblins	10.95	Micro English (8-GCSE)	18.95
Barbarian II (Psychosis)	17.95	French Mistress	15.99	Micro French (Begin - GCSE)	18.95
Batman - Caped Crusader	6.96	Fun School 2 (6-8)	6.96	Micro Maths (11 - GCSE)	18.95
Batman - The Movie	6.96	Fun School 2 (over 8)	6.96	Microprose Golf	23.95
Battle Chess	8.95	Fun School 2 (under 6)	6.96	Midnight Resistance	6.96
Battle Toads	17.95	Fun School 3 (5-7)	17.95	Midwinter I	20.95
Battlehawks 1942	10.95	Fun School 4 (5-7)	17.95	Midwinter II	23.95
Beach Volley	6.96	Fun School 4 (7-11)	17.95	Mig 29M Super Fulcrum	26.95
Beastbusters	17.95	Fun School 4 (under 5's)	17.95	Monty Python	7.95
Better Maths (12-16)	19.95	Future Wars	10.95	Monstone	20.95
Better Spelling (8-adult)	19.95	G-LOC	17.95	Moonwalker	6.96
Bitmap Brothers - volume 1	17.95	Gauntlet II	6.96	Motorhead	12.95
Bitmap Brothers - volume 2	17.95	Gauntlet III	17.95	Myth	17.95
Blue Max	11.95	German Master	15.99	Narc	6.96
Board Genius	17.95	Ghostsbusters 2	6.96	Narco Police	6.96
Bonanza Brothers	15.96	Gobblins	17.95	New Zealand Story	6.96
Brain Blaster	6.96	Gobblins 2	17.95	Nigel Mansell's World Championship	20.95
Brides of Dracula	17.95	Godfather	20.95	Nightbreed - action game	6.96
Bubble Bobble	6.96	Gods	17.95	Ninja Collection	13.95
Bunny Bricks	17.95	Golden Axe	7.95	North & South	6.96
Cabal	6.96	Golden Eagle	17.95	Omar Sharif's Bridge	23.95
Cadaver - The Payoff	11.95	Graham Snoucer Soccer Manager	6.96	Operation Thunderbolt	6.96
Caesar	20.95	Graham Taylor's Soccer (1Mb)	17.95	Operation Wolf	6.96
Captain Planet	17.95	Great Napoleonic Battles	20.95	Outrun Europa	17.95
Carl Lewis Challenge	17.95	Guy Spy	20.95	Pacific Islands	20.95
Carrier Command	7.95	Harlequin	17.95	Pang	6.96
Cartoon Collection	17.95	Harrier Assault	26.95	Panza Kick Boxing	7.95
Castles	20.95	Head Over Heels	6.96	Parasol Stars	7.95
Cave Maze	10.95	Heimdall	23.95	Picture Fractions	10.95
Celtic Legends	20.95	Heroquest	17.95	Pinball Dreams	17.95
Champions (Comp)	13.95	Heroquest - Twin Pack	20.95	Plan 9 from Outer Space	23.95
Championship Manager	17.95	Hitchhiker's Guide to the Galaxy	7.95	Platinum (Comp)	17.95
Chaos Engine	17.95	Hook (1Mb)	17.95	Populous	8.95
Chart Attack - vol 1 (Comp)	20.95	Hoversprint	6.96	Populous II (1 meg)	20.95
Chase HQ 1	6.96	Hudson Hawk	17.95	Populous II (1/2 meg)	20.95
Chips Challenge	17.95	Humans	20.95	Power Pack (Comp)	17.95
Chuck Yeager 2	8.95	Hunt for Red October	7.95	Powerdrift	6.96
Cisco Heat	15.96	Ian Botham's Cricket	20.95	Powermonger	20.95
Civilisation (1Mb)	23.95	IK+ (Not STE)	6.96	Powermonger Data Disk (WW1)	11.95
CJ in Space	6.96	Imperium	8.95	Predator 1 (Not STE)	6.96
Continental Circus	7.95	Indiana Jones & L. Crusade (ACT)	6.96	Primary Maths Course (3-12)	18.95
Cool Croc Twins	17.95	Indiana Jones & L. Crusade (ADV)	12.95	Prince of Persia	6.96
Count Duckula	6.96	Int'l Heat	17.95	Pro Tennis Tour 1	6.96
Creatures	17.95	International Ice Hockey	6.96	Projectyle	8.95
Cruise for a Corpse	19.95	International Rugby Challenge	17.95	Psycho's Soccer Selection	20.95
Crystal Kingdom Dizzy	13.95	International Sports Challenge	20.95	Push-Over	17.95
Cybercon III	17.95	Ishar - Legend of the Fortress	20.95	Puzzle	17.95
D-Generation (1Mb)	14.95	Italian Tutor	15.99	Quest and Glory (Comp)	20.95
Daley Thompson's Olympic Challenge	6.96	Ivanhoe	6.96	Quest for Adventure (Comp)	23.95
(Not STE)	6.96	Jaguar XJ220 (1Mb)	17.95	R-Type I	6.96
Deluxe Paint	40.95	James Pond	6.96	R-Type II	15.96
Demon Blue	6.96	Jim Power	17.95	R.B.I. Baseball 2	20.95
Deuterons	20.95	Jimmy White's Whirlwind Snooker	20.95	Race Drivin'	18.95
Devpac ST V2.25	31.95	Joe & Mac - Caveman Ninja	17.95	Ragnarok	26.95
Dizzy Collection	17.95	John Barnes Euro. Football (1Mb)	14.99	Railroad Tycoon (1Mb)	23.95
Dizzy Panic	6.96	Junior Typist (5-10)	14.95	Rainbow Collection	13.95
Dizzy's Excellent Adventures	17.95	Jupiter's Masterdrive	6.96	Rainbow Islands	6.96
Doodlebug	17.95	Kick Off + Extra Time	6.96	Rampart	17.95
Double Dragon I	7.95	Kick Off II (1/2 Meg)	13.95	Realms	20.95
Double Dragon II	7.95	Kid Gloves II	17.95	Reasoning With Trolls	10.95
Double Dragon III	17.95	Knightmare	20.95	Renegade	6.96
Dragon Ninja	6.96	Knights of the Sky (1Mb)	23.95	Rick Dangerous I	6.96
Dragon's Lair - Singes Castle	23.95	Kult	6.96	Roadblasters	6.96
Dreadnoughts	25.99	Kwik Snax	6.96	Robin Hood	17.95
Dream Team	17.95	Last Ninja II	6.96	Robocop	17.95
Driller	6.96	Last Ninja III	17.95	Robocop I	6.96
Dune	20.95	Leader	17.95	Robocop II	15.96
Dungeon Master/Chaos Strikes Back	20.95	Leeds United Champions	17.95	Robocop III	17.95
Edd the Duck	6.96	Legend	20.95	Rodland	17.95

3 1/2"
Double Sided
Double Density

QUANTITY	PRICE
10	£5.30
20	£10.35
25	£12.65
30	£14.75
35	£16.90
40	£18.95
45	£21.10
50	£22.95
80	£36.35
100	£41.70
120	£49.40
150	£60.95
200	£78.75
250	£97.30
300	£116.30
400	£154.50
500	£184.65
1000	£364.30
2000	£728.50

WITH LABELS & WARRANTY

BOXES

(with keys & dividers)

10 Slimpack	£0.94
40 capacity	£4.95
50 capacity	£5.60
80 capacity	£6.30
80 capacity Banx	£14.95
100 capacity	£6.80
120 capacity	£8.75
140 capacity	£9.95
150 capacity	£10.95
150 Deluxe stackable	£21.95

JOYSTICKS

Python 1 (QS130F)	£9.25
Maverick 1 (QS128F)	£13.75
125+	£9.00
The Bug	£13.50
Star Probe	£13.50
Competition Pro 5000 - black	£13.75
Speedking A/F	£11.00
Navigator A/F	£13.75
Topstar (SV127)	£21.50
Supercharger (SV123)	£9.00
Sting Ray A/F	£12.50
Megastar A/F (SV133)	£22.00

MISCELLANEOUS

Philips CM8833 II monitor	£224.95
Zydec disk drive	£49.90
Mouse	£14.75
Mouse mat	£2.95
Mouse house	£2.95
Head cleaner	£3.75
Dust cover (Atari)	£3.65
Dust cover (monitor)	£6.99
Dust cover (LC10)	£7.65
Dust cover (LC24)	£6.99
Trackball	£28.75

All Prices include UK postage and VAT and are effective until January 10th 1993

Overseas orders - Postage charged at cost. New titles will be sent as they are released and are subject to manufacturers price reviews.

Credit Card orders: (10.00am - 10.00pm, 7 days not an answer phone)

Fax Orders: 071-608-0688

Now Extended Opening For Christmas - From November 7th -

Showroom open 10am - 8pm Weekdays 10am - 4pm Saturdays

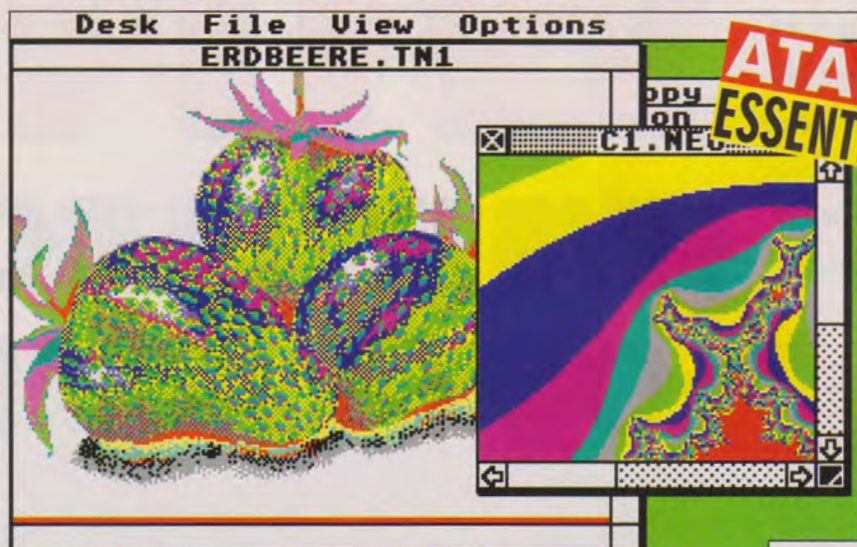
Cheques/Postal Orders to

DataGem Ltd, Dept STR, 23 Pitfield Street, London, N1 6HB
Showroom open Monday - Friday 10am - 6pm Exit 2, Old Street Tube

All orders taken subject to our standard terms & conditions

IMAGE CONSCIOUS

Having problems taking snapshots of the screen. Ofir Gal takes a look at the ST Club's solution and discovers how easy it can be to put yourself in the picture



Imagecopy can display up to four images at any time in a friendly GEM window environment. Windows can be moved, resized, scrolled and closed.

There are plenty of programs available in the public domain which enable you to take snapshots of the screen and save them to disk.

Some, such as *Megasnap*, are placed in the auto folder and respond when you press the Alternate+Help key combination. Others are desk accessories which allow you to 'rubber-band' the required portion of the screen. Each program may only support one or two of the many picture file formats and you may need to convert the files before they can be used in your favourite DTP or word processing package.

From the ST Club comes yet another low-cost and useful utility to help you get around all these problems. *Imagecopy* can be run as a desk accessory or as a standard program and it can load, save, print and convert between almost any known picture format in any resolution.

DOCUMENTATION

Imagecopy comes in a plastic holder which contains one floppy disk and a slim manual. If you're one of those many people who don't like reading long manuals (and who does?), you'll be

pleased to know that the manual is only 19 pages long and is illustrated with screen shots to help you get to grips with the program. The disk contains both accessory and program versions of *Imagecopy* as well as *FreeMem*, a program that gives a better than usual report about RAM usage and fragmentation. Also on disk is a collection of picture files in various formats and resolutions.

VERSIONS

The accessory and program versions of *Imagecopy* are identical in operation, except that the accessory version can be used while another program is running. When you run *Imagecopy* or select it from the desk menu, you are presented with a menu displaying the various options.

Imagecopy offers several ways of taking a snapshot of the screen. You may select Copy Image from the drop-down menu or press C which displays a pointing finger, enabling you to select the portion to be saved. A unique feature is the ability to make fine adjustments to the frame by pressing the cursor and shift keys. Once the correct part of the screen is in

the frame, pressing Return displays the file selector where you can name the file and save it.

It is also possible to take a snapshot of the screen in the same way by pressing Alternate+Help, useful if you cannot access the accessory menu.

FORMATS

Imagecopy can save images in several formats. Degas compressed and non-compressed formats are supported as well as Atari's own IMG and Resource file format. The latter of these can be used by programmers to import icons and images into their own programs. In addition, *Imagecopy* will enable you to convert any IMG, Degas (PI? and PC?), Neochrome, Art Director and Tiny format picture files into IMG, Degas and RSC formats.

VIEWING

You can also view up to four pictures, crop them if needed, then re-save them before importing the files into a DTP program.

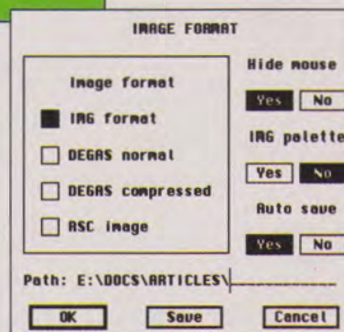
The program will also let you print images and it offers support for most popular printers, including both bubblejets and laserjets. You also have the choice of portrait or landscape orientation and paper sizes.

RELIABLE

Using *Imagecopy* is straightforward and easy. It is stable and reliable and enables you to get exactly the part of the screen you are interested in.

The screen shots in this review were taken using *Imagecopy* which demonstrates the accuracy that can be achieved.

Written by Jeremy Hughes who also gave us such excellent programs as *Font Kit Plus*, *Imagecopy*



Imagecopy can save files in various formats. Other options allow you to hide the mouse from the screen shot and select the path *Imagecopy* will use to save files.

is a comprehensive and versatile utility. Whilst it is easy to use, it provides features that you won't find on similar programs. All this, coupled with a very low price, makes *Imagecopy* a winner.

"The ultimate image utility"

NAME: IMAGECOPY V1.2

COMPANY: ST CLUB

CONTACT: 0602 410 2411

PRICE: £9.95

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5 MB

EASE OF USE ★★★★★

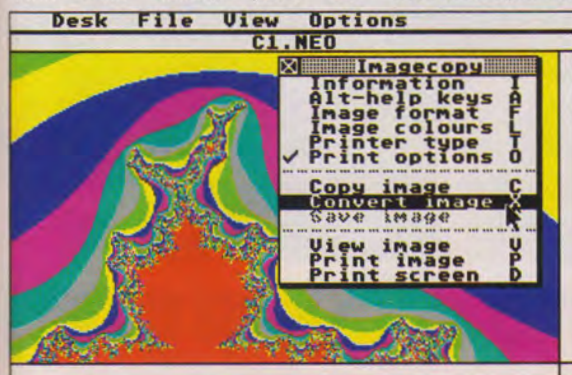
DOCUMENTATION ★★★★★

EFFECTIVENESS ★★★★★

VALUE FOR MONEY ★★★★★

OVERALL **95%**

The pull-down menu displays the main features of the program. Here you can select file format and printer type or invoke any of the available functions. Any options can also be saved to disk.



We've got five fabulous Atari Lynx hand-held computer games systems to give away this month, and all you have to do is answer a few simple questions

WIN A

FIVE LYNX COLOUR FOR GRABS!!

SOME OF THE LYNX GAMES AVAILABLE

APB
Awesome Golf
Baseball Heroes
Basket Brawl
Bill And Ted's Excellent Adventure
Blockout
Blue Lightning
Cabal
California Games
Casino
Chequered Flag
Chips Challenge
Crystal Mines 2
Electrocop
Gates Of Zendecon
Gauntlet 3
Golf Challenge
Grid Runner
Hard Drivin'
Hockey
Hyperdrome
Ishido
Klax
Ms Pacman
NFL Football
Ninja Garden
Pac Land
Paperboy
Rampage
Road Blasters
Robo Squash
Robotron
Rolling Thunder
Rygar
Scrapyard Dog
Slime World
Stun Runner
Superskweek
Toki
Tournament Cyberball
Turbo Sub
Viking Child
Warbirds
World Class Soccer
Xenophobe
Xybots
Zalor Mercenary

...and many more.



We've teamed up with Atari UK to offer you the chance to own one of five Lynx hand-held computer games packs.

Prizewinners will receive a **Batman Returns** Lynx pack, which would otherwise set you back £99.99. The pack contains the great **Batman Returns** game as well as the Lynx itself.

Boasting 4096 colours, 64 Kilobytes of RAM, a 16 Mhz processor and eight Megabyte game capacity, we can guarantee that this amazing games machine will keep you amused for a long time to come. There are hundreds of games available for you to choose from (see box, left). All you have to do to be in with a chance is ring the

Michelle Pfeiffer plays Catwoman in the film.



Superb makeup for Danny DeVito as the Penguin.

THE ST REVIEW COMPETIT

LYNX!

HANDHELDS UP

**WORTH
£500!!**



Michael Keaton as Batman in the film *Batman Returns*.

RULES

The lines will be open from 14th December 1992 until 14th January 1993 only. The winners will be selected at random from all of the correct entries received after that date. Please note that this competition is only open to residents of the UK mainland and no entries will be accepted from employees of EMAP Images or Atari UK.

Winners will be notified as soon as possible after the closing date. The editor's decision is final and no correspondence will be entered into. There is no cash alternative to the prizes offered. Entry into the competition signifies acceptance of these rules.

Calls are charged at 48p per minute peak rate and 36p at all other times.

HOW TO ENTER

Anyone that wants to play games on the world's best colour handheld will want to enter this competition. Luckily, entering our competition could not be simpler. Just ring 0839 500813 between 14th December 1992 and 14th January 1993 and answer a few easy questions about the Lynx. The winners will be selected at random from all of the correct answers received after the closing date.

ION HOTLINE 0839 500813

FIRST IMPRESSIONS

COOLWORLD

Ocean's latest game ties in to a film with a tortuously twisting plot...

It's not often that Ocean makes a mistake with a film license, but they may not be able to ride on a wave of publicity surrounding the film *Coolworld*. Starring Kim Basinger, it's possible that the film may not be seen in cinemas and actually just go straight to video release.

Whilst the film and its eventual release may be subject to some controversy, the game is certainly going to have a showing on the ST. Based loosely around the film's complicated storyline, you take on the role of Harris – a cop with a difference. He's actually trying to keep the peace in Coolworld, an alternative reality populated by doodles where anything that can take place in a comic book can be accomplished.

Unfortunately, one of the doodles, (as played by Kim Basinger in the film), is hell-bent on getting it on with a human, who's

In the film Holly, played by Ms Basinger, is a sexual animal and the intro sequence has tried to capture this with the use of some completely inadequate underwear.



just warped into Coolworld. Warned against it, she seduces him anyway and creates an imbalance that could mean the loss of both worlds.

You must skip between both worlds – and police them to keep the imbalance to a minimum. To do this you must flit between the two worlds of doodles and reality and destroy anything that you find existing in the wrong dimension. Complicated? You bet it is, but it all dilutes down to a platform-based shoot-'em-up with warps between levels and various power-ups. We'll be reviewing the game in full in a later issue but for now just take a look at the provocative intro screen shots and the gameplay.



You can access the map at any time to keep track of your progress and see where you need to go next.



Here in Cool-world, there's always a host of doodle-like characters to avoid. The warp at the top of the screen moves you across the map.

STREET FIGHTER II

Wayne Legg gets to grips with US Gold's new urban combat game and discovers that it really is tough on the streets

Complete mayhem returns to the ST once again, this time in the form of *Street Fighter II*, US Gold's conversion of Capcom's classic arcade game. In the past, some arcade-to-ST conversions have been less than impressive, but this is definitely not the case with *Street Fighter II*.

The game allows you to control any one of the eight strongest characters in the world, and your aim is to destroy all opponents that stand before you. Utilising the many fighting styles available, you must crush your opponents before they do the same to you. Each character has a range of highly individual combat techniques plus special abilities, which makes every one of them a lethal fighting machine.

Chun Li shows Blanka that brawn isn't everything, by finishing him off with her Spinning Bird Kick.



For example Ryu, the karate champion from Japan, can send forth a fireball from his hands by harnessing his inner powers – with devastating effects. He can also strike with the Dragon Punch, a powerful, energy-sapping clench-fist blow, and deliver dangerous feet attacks with his Hurricane Kicks, amongst other things.

Other characters include the incredibly overweight but lethal, Honda, a Japanese Sumo warrior; Zangief, Russia's massive champion street fighter; and Blanka, a South American rain-forest dweller with the ability to strike with electrical shocks



Ryu (Japan) – Martial artist and very agile to boot.



Zangief (Russia) – Street brawler and proud of it.



Guile (USA) – Karate expert and certainly not gullible.



Chun Li (China) – Pretty (and) dangerous.

TRANSARCTICA

All aboard for Silmarils' latest post-apocalyptic adventure

Silmarils' last release, *Ishar*, was taken to the hearts of most of the reviewers on ST Review and this month we pull the sheets back on Transarctica, where your task is to simply bring back the sun.

The game has a futuristic scenario where the Greenhouse Effect has finally taken hold of the planet and only the successful completion of a brave, scientific experiment, Operation Blind, can restore the earth.

Unfortunately, the miscalculations of the scientists cause the earth to tumble into a nuclear ice age – civilisation all but perishes under the ensuing ice sheet.

The game sees the earth centuries later. Some semblance of civilisation has returned despite the snow and ice. Small station towns have developed, with the only means of travel between them being huge trains controlled by the Viking Union along with the only source of power and currency left – coal.

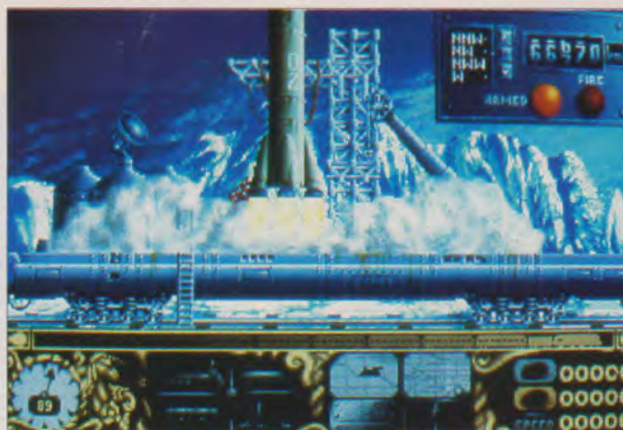
Play takes place on board the Transarctica where you begin your hunt for the sun. You must travel across the world's surface looking for clues to enable you to clear the stratosphere of ash and debris and cause the sun to put his hat back on.

The game is played in real time (one second = one minute), so players must be able to think on their feet as they constantly develop strategies and update them.



Victoria Station in the icy future. It really doesn't seem that different (except that the people are more normally dressed).

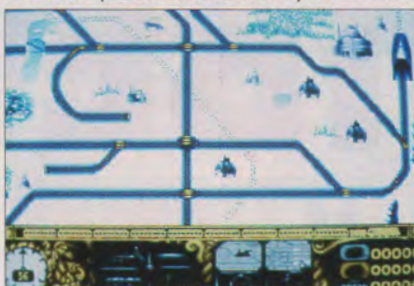
Whilst steam runs the world, more advanced technology is available to destroy it.



Crucial to this is the smooth running of the Transarctica. You must decide on destinations, find coal and mine it for fuel and currency. At the same time you must look after the engines, build new wagons which are self-contained communities with war wagons, prison wagons, living wagons and so on.

Needless to say, all of this leads to an involved game requiring a myriad of tactics. There is even an optional arcade sequence which happens if you pass a Viking Union train. Weapons include missiles, cannons, infantry and even mammoths. You can even control teams of commandos to mine bridges and railway track...

A Falcon version is expected to coincide with the release of the computer in the new year. We'll be looking at *Transarctica* in closer detail in a future issue and expect it to be the hottest ice adventure since *Midwinter*.



Planning your journeys is crucial if you don't want to run out of coal, but at least you don't have to worry about leaves.

and a barrel-roll attack.

Street Fighter II allows for either player versus player or player versus computer combat – with the latter allowing you to test any one of the eight characters against one of four controlled by the computer – and the result is hundreds of hours of action-packed fun.

From the moment your character throws its first punch, you can see that the scrolling is truly superb. The jumping, lunging, rolling, leaping and spinning is all pixel perfect, with every move being gracefully executed. Every character moves fluidly and it is worth noting that you have to be the correct distance away from your opponent for your blows to land precisely. This is where hours of practice pays off, as executing your character's special moves with split-second accuracy is essential if you want to do well.

Another factor that makes the game highly enjoyable is its balance. Characters who have the advantages of awesome blows and high energy suffer the disadvantages of slower movement and weaker special powers. This enables players to



Honda sends a crushing blow to Guile's Midriff, leaving him severely weakened.

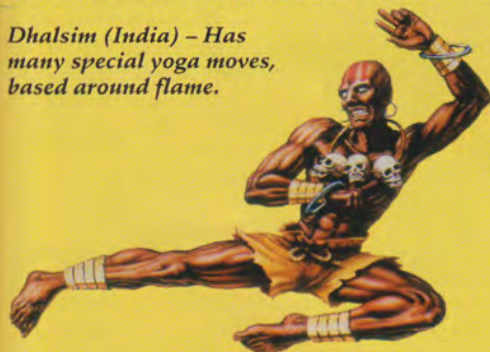
exercise their game-playing skills, with timing and preciseness being pitted against hand-to-eye co-ordination and strategy.

To add atmosphere, the game's designers have supplied various backdrops, ranging from a US air-force base to an Indian palace. In the background various characters whoop and cheer your character on, while you are engaged in the ignoble art of street fighting. Needless to

say, the sound quality is top-class, with every blow represented by bone-crushing crashes and stomach-churning thumps.

According to US Gold, *Street Fighter II* has taken a long time to convert to the Atari ST because of the amount of graphic detail it contains. Indeed, the game's release has been put back slightly because of these conversion problems and ST owners can look forward to seeing Street Fighter II on sale around late December or mid-January.

Dhalsim (India) – Has many special yoga moves, based around flame.



Blanka (Brazil) – A man with literally shocking attacks.

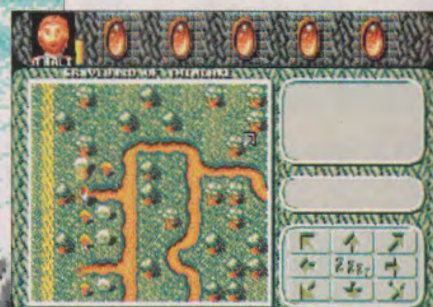


Honda (Japan) – Would you call him fat to his face?



Ken (USA) – Flash, fast and furious.





The game starts in the cemetery. It's not a good place to hang around after dark, though.

AMBERSTAR

Magic and mystery abound as Thalion's latest unfolds. Mark Patterson unravels the mysteries...



Most RPGs feature a group of heroes out to destroy some unmentionable evil, but in **Amberstar** you can go one better and unleash a pre-emptive strike to prevent this evil manifesting itself at all. 1000 years ago Tarbos, the God of Chaos, was imprisoned on the third moon of the planet Lynamion. However, the magician Marmion is now attempting to release Tarbos from lunar exile.

The only thing that can prevent him succeeding is the Amberstar, which has been broken into 13 pieces. Luckily, rituals for freeing gods trapped on orbiting satellites take a while to complete - in

fact there's enough time for a bold party of adventurers to seek out and reunite the shards of the Amberstar.

GETTING STARTED

Starting off isn't quite as straightforward as loading the game, though. If you're booting from floppies you need three blank disks to make write-enabled back-ups of the game disks, as the program information is constantly updated and saved. The next step is to generate your party.

You need six adventurers skilled in arts such as wizardry, theft and combat. Although the basis is rolling a couple of computer dice to determine a character's strengths, which are divided into categories such as strength, dexterity and luck, there's actually a lot of number crunching involved. For instance, a human warrior is faster than a dwarf, but the short guy can pack a harder punch and is far more resilient to blows.

Party members can be recruited in taverns and other places of disrepute. It pays to talk to anyone who looks capable of wielding a sword or chucking fireballs around, just in case they have some adventuring prowess and free time on their hands.

STYLES

The game is split into two distinct styles - overhead

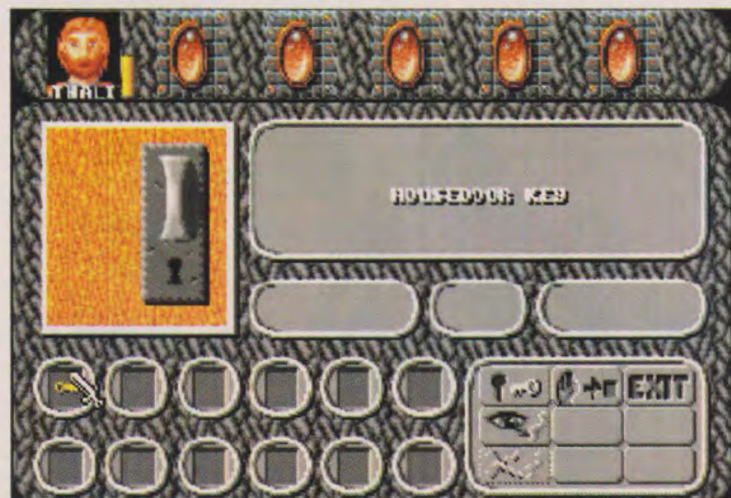
**Very large
Well packaged
Comprehensive play system**

PROS AND CONS

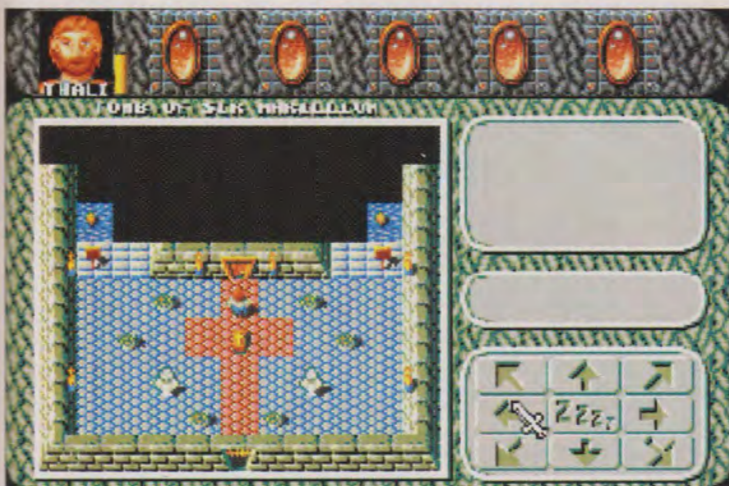
**Requires three blank disks
Can be tedious at times**

view and 3D. The overhead section is used to navigate between towns and other locations, and shows a great deal of the surrounding area. The party is moved around the map by either clicking on the set of arrows at the side of the display, or placing the pointer on the section of map you want them to go to then hitting the mouse button. For all their talents, the party isn't very bright, and constantly blunder into trees, so you have to take time out to steer them around the most insignificant objects, which can be very irritating. To see the game in 3D you have to enter a dungeon, building or combat.

When you click on an object such as a picture or lock you're presented with a picture of it plus several options. It's usually wise to search for traps before anything else. If you perform a certain act the icon will be dulled. So that you don't miss anything it's



Clicking on an item calls up a close view, where other objects can be used in conjunction with it.



When you enter a building the view changes from 3D to top-down. Clicking with the right mouse button changes the bank of movement icons to command icons.

best to try everything possible with every combination of objects, especially if you've come to a standstill.

Combat is a complicated process. For starters you can be attacked from all sides, not just the front. To show you what's happening there's a tactical display at the side of the screen; this indicates where the monsters and the party members are standing. Each character takes it in turns to act.

To attack a monster with a sword or similar weapon, the character has to be right next to them. Spells can be cast at any time, although it's essential to keep your wizards out of harm's way as you'll find that they're not very good at defending themselves.

The characters are arranged in a marching order, which determines where they'll stand during combat and who'll take the brunt of any traps. It should be updated every time a new character joins the party so you can make best use of their

strengths and make any necessary allowances for any of their inherent weaknesses.

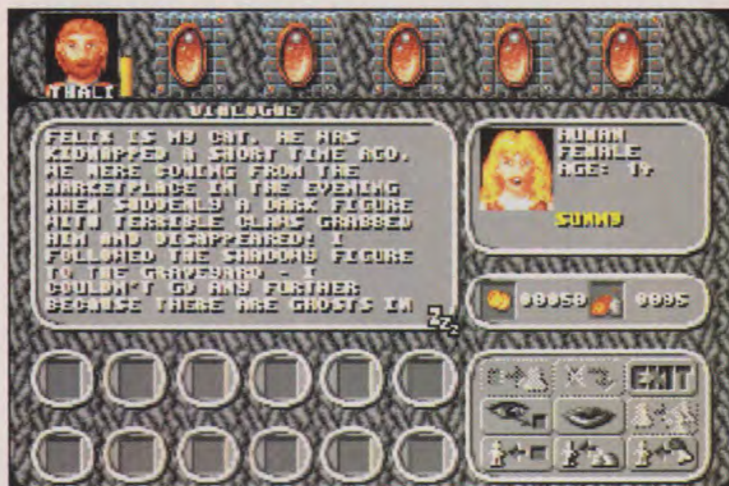
CAMPS

After a lengthy battle it's usually wise to set up a camp. Here the fighters can patch themselves up, have some food and rest, while the wizards memorise more spells. It pays to keep the map that comes with the game handy.

A good deal of the information that you need can be gained by chatting to the land's various inhabitants. When you enter a conversation you are shown a list of topics that you can ask about, although you're often required to type in your own statements if you want to gain information pertaining to your quest.

TRAPS

Traps are a constant hazard in dungeons. They range from simple traps which cause minor injuries to every member of the party, to infection



During a conversation you're given a list of topics to chat about.

and petrifying traps. Many of the dead-ends you come across in dungeons are caused by puzzle mouths. These devices usually ask you a question and if you supply the answer they normally reward you by opening a doorway. This means you have to be very thorough in the preceding section, chatting to everyone and searching everywhere.

Sometimes it does get frustrating when you're faced with a question you haven't found the answer to, only to realise you pursued the wrong line of questioning with a particular character.

AUTOMAP

One useful feature is the automap. It's very easy to get lost, so as you progress through a maze you can call up the map screen at any time, which shows the areas you've visited plus a key that shows what the various icons mean. It comes in particularly handy at the start of the game, as the city it starts in

is very large and it's easy to miss important locations.

Much of the equipment you need can be found by looting corpses after a battle. It literally pays to keep items you

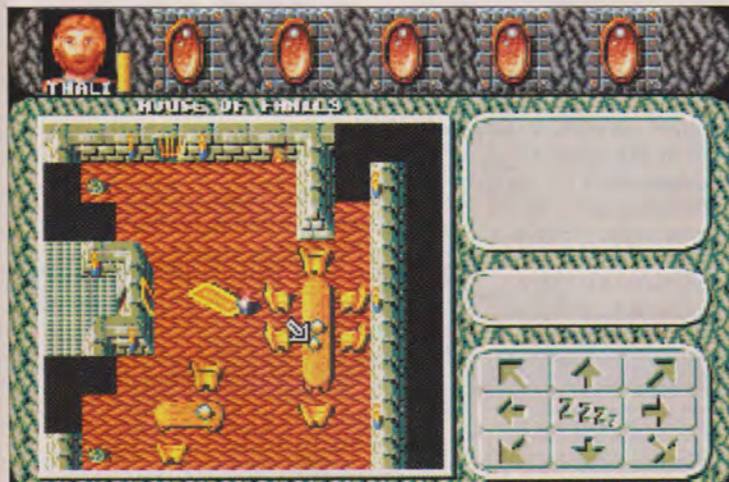
INSIDE INFO

There are three schools of magic in the realm of Amberstar, each with a unique set of spells.

White Magic: This field is made up from healing spells and a few offensive incantations such as the pleasant Cause Blindness.

Grey Magic: This could be called the Swiss Army knife of the mage world. There are useful spells such as create light, magic compass, teleportation and clairvoyance.

Black Magic: The only purpose of black spells is to cause the person on the receiving end maximum pain. With these spells you can burn, drown, shake, bury or even disintegrate anyone who gets in your way.



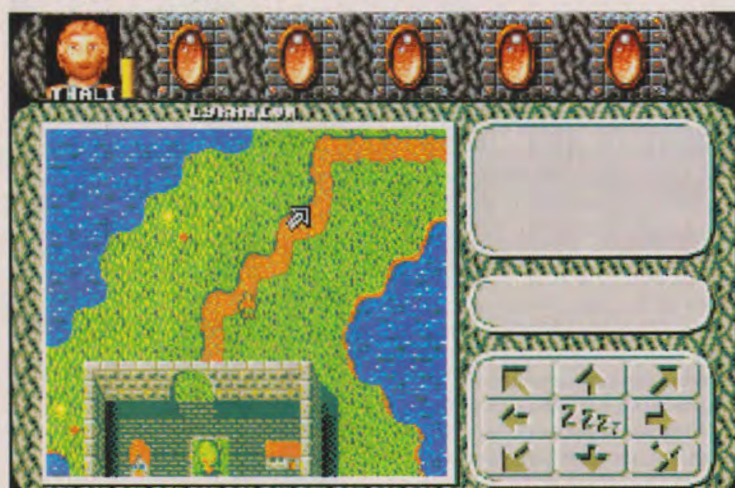
Finding your parent's house is one of the first tasks. Inside you'll find some handy magic potions as well as armour and weapons.



The magic picture seems like a red herring at first, but it soon comes in handy.



You don't encounter many people at first, but when you do find some one they're usually full of advice.



Fail to carry enough grub and you'll come to an untimely end in the middle of nowhere.

don't need as they can be sold to a merchant. You will visit several different types of shop during the game. Food traders are very important, as your party will starve if they

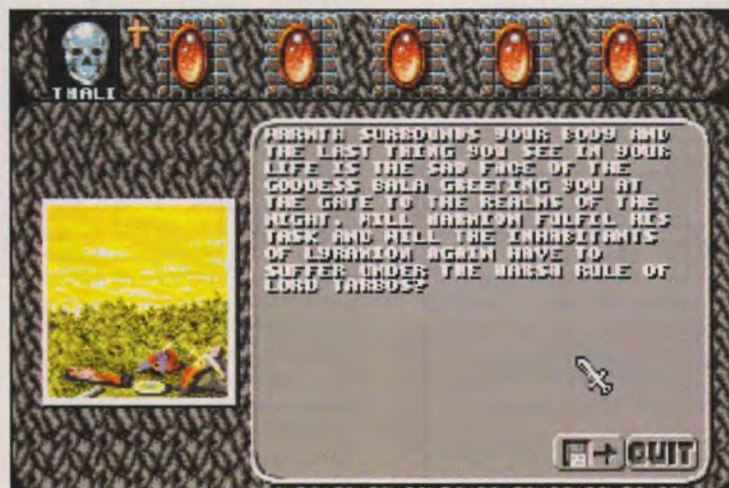
enter the wilderness without enough rations. Other modes of transport such as boats and horses can be bought, although these cost a lot of gold so you need to be a fair way into the game before you can afford them.

GUILDS

As your party wins battles, it gains experience. Unlike many RPGs where experience points guarantee an increase in ranks, you need to be a member of a guild in this game. Guilds are quite happy to let any adventurer join, providing they've got enough cash. To advance a level you need to have earned plenty of gold as well as experience points. It's worth the effort though: as characters increase in rank they gain new skills and abilities and wizards pick up extra spells, some of which are essential in the later stages. As soon as you've amassed enough gold you should always get your party members to their respective guilds. You usually don't have to go far to find tougher monsters and meaner



The auto-map feature goes to work as soon as you enter a new area. The maps are larger than the window so you have to scroll around it.



It's not wise to enter the wilderness before you've recruited a few mates and tooled up with weapons.

traps, so it's best to have the party at maximum strength whenever possible.

Death doesn't always mean the end of a character, in fact there's much worse that can happen, such as having your corpse burned or disintegrated by magic. The cheapest way to resurrect a deceased character is by having a competent white wizard in your party who has mastered the appropriate beyond death spells. Obviously this is something you won't have early on in the game, so the alternative is to find a healer, who will perform the same job and relieve you of your gold at the same time.

Amberstar is a complex and well thought-out RPG, but it's too big for novice adventurers – there are so many features with some aspects, such as combat for example, getting very confusing at times.

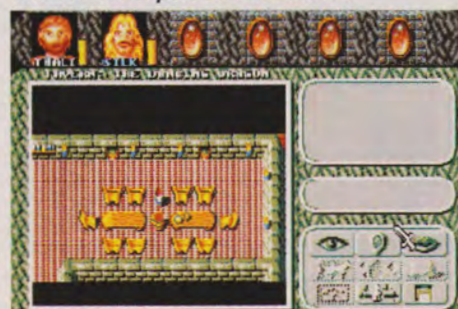
One of **Amberstar's** major drawbacks is the absolutely horrendous amount of disk

swapping involved, just walking into a building can require two disks.

The access time is also slow, which makes for some extremely annoying breaks in the action. Fortunately the game is hard disk installable, and if you see it running off one you might not want to go back to floppies.

Some of the graphics are weak, especially the tiny characters which merge with the backgrounds on the top-down view, but there are enough neat creatures to balance this out. It's also very large, so it should keep you going well into the New Year.

Pubs are very good places to pick up gossip and recruit expert sword-smiths.



"Feature packed and fun to play, this one looks set to last"

NAME: AMBERSTAR
COMPANY: THALION
CONTACT: 021 442 2050

PRICE: £29.99
RELEASE DATE: NOW
MIN MEMORY: 1 MB

GRAPHICS ○○○○★
SOUND ○○○○★
VALUE FOR MONEY ○○○○★
PLAYABILITY ○○○○★

OVERALL **82%**

MJC COMPUTER SUPPLIES

Suppliers of Discount Software since 1984

Educational, Local Authority and government orders welcome. Overseas orders please call or write for quotations. All goods subject to availability, prices subject to change without notice. E&OE

Prices include VAT and delivery by post, Courier delivery from £3, please ask for details. Please allow 5 days for cheque clearance.

TO ORDER: Please call the telephone number listed below to place credit card orders - (Access/Visa) or send cheques/POs made out to MJC Supplies to:

MJC SUPPLIES (STR),
Unit 2 The Arches, Icknield Way,
Letchworth, Herts SG6 1UJ.
Tel: (0462) 481166 (6 Lines)

HISOFT PRODUCTS

HISOFT BASIC VERSION 2

Hisoft Basic 2 comes complete with a Compiler and Debugger. The package is a complete development system which is ideal for both professional and casual programmers.

RRP £79.95 OUR PRICE £54.95

HISPEED PASCAL

HighSpeed Pascal is designed to be compatible with the hugely successful Turbo Pascal on the PC. It features a fast single pass compiler, compilation speed of more than 20,000 lines per minute. Compile to memory or disc and an integrated multi window editor.

RRP £99.95 OUR PRICE £69.95

NEW - HISOFT DEVPAK 3

Hisoft Devpac 3 is the latest version of the popular assembler & debugger package for the ST. Packed full of features it is the ideal programming environment for beginners and professional programmers alike. It contains an editor, assembler and a debugger.

RRP £79.95 OUR PRICE £47.95

HISOFT C INTERPRETER

Hisoft C lets you develop, debug and test programs quickly and easily in a simple environment. Hisoft C features over 460 library functions, fast and powerful Gem based editor and built-in help for quick and easy reference.

RRP £59.95 OUR PRICE £39.95

HISOFT LATTICE C V5.5

Lattice C V5.5 is a versatile and powerful development system for the popular C programming language, adhering extremely closely to the ANSI standard. It contains the most complete set of C libraries to be found on the Atari 68000 computers, Gem based installation program, multi window editor, project manager and lots more.

(Requires 1 Meg)

RRP £149.95 OUR PRICE £99.95

SOUND SAMPLERS

STEREO MASTER

Stereo Master is a low cost, high quality sound sampler for the ST. Its features include: Sample rates from 3.0 to 27.9 Khz, mix sample with full or half volume, hifi stereo playback option using the Playback cartridge, full STE stereo support.

RRP £39.95 OUR PRICE £29.95

REPLAY 8

Replay 8 features powerful sampling and playback commands such as Sample, Pre-Sample, Auto Record Trigger and more, as well as the usual editing commands. Replay 8 also contains some Special Effects software and a 2 voice programmable Drum Machine called Drumbeat 8.

RRP £59.95 OUR PRICE £44.95

STEREO REPLAY

This system can record in high quality stereo from its twin phono input sockets, taking sounds from any suitable Stereo equipment such as a Portable Cassette or CD player. Editor features include Mark Hide, Cut, Loop, Paste, Insert, Delete, Fill, Clear, Overlay, Reverse, Fade, and many more.

RRP £89.95 OUR PRICE £64.95

REPLAY PROFESSIONAL

Replay Professional is probably the most complete Sound System for the Atari ST. It comes complete with Editing software as well as the Drumbeat Professional 4 channel Drum Machine and Midplay which turns your ST into a powerful sound sampling synthesizer. It can sample at rates between 5 and 48 Khz.

RRP £99.95 OUR PRICE £79.95

REPLAY 16

The first 16 bit sound sampler for the Atari ST. Contains an Editor, Midplay Sequencer and Drumbeat 16. Samples at rates up to 48 Khz.

RRP £129.95 OUR PRICE £95.00

MICE

NAKSHA MECHANICAL MOUSE

Our most popular mouse includes Operation Stealth, Mat and Holder

OUR PRICE £22.95

SQUICK MECHANICAL MOUSE

A great value replacement mouse

OUR PRICE £12.95

EDUCATIONAL SOFTWARE

FUN SCHOOL

The all time best selling educational software from Database Educational. A number of programs on each package covering a range of subjects.

FUN SCHOOL 2

8 Programs Per Pack

Fun School 2 - For 2 to 6 years £6.95
Fun School 2 - For 6 to 8 years £6.95
Fun School 2 - For the over 8's £6.95

FUN SCHOOL 3

6 Programs Per Pack

Fun School 3 - For 2 to 5 years £15.95
Fun School 3 - For 5 to 7 years £15.95
Fun School 3 - For the over 7's £15.95

FUN SCHOOL 4

6 Programs Per Pack

Fun School 4 - For 2 to 5 years £16.95
Fun School 4 - For 5 to 7 years £16.95
Fun School 4 - For the over 7's £16.95

ANSWERBACK QUIZ - by Kosmos

Answerback Junior Quiz (6-11) £14.95
Answerback Senior Quiz (12+) £14.95
Factfile Arithmetic (6-11) £7.95
Factfile Spelling (6-11) £7.95

Factfiles are for use with the Answerback Junior Quiz only.

KOSMOS LANGUAGE TUTORS

French Mistress £14.95
German Master £14.95
Spanish Tutor £14.95
Italian Tutor £14.95

LCL SOFTWARE

Each package is designed to be a complete course, including a 100 page paperback book, with 24 programs.

Primary Maths (3-11)

Micro Maths (12/Adult to GCSE)

Micro French (12/Adult to GCSE)

Micro English (12/Adult to GCSE)

Micro German (12/Adult to GCSE)

£19.95 Each

or £38.00 for any two

For further details on our range of educational software please send or phone for our Educational Supplement.

LAUGH & LEARN WITH ADI

ADI is a friendly alien which appears on this latest range of educational software from Database (the manufacturer of Fun School). Each package is designed to follow the National Curriculum for a particular school year.

ENGLISH 11/12

Features pronouns, verbs, adverbs, spelling, synonyms, prefixes/suffixes.

ENGLISH 12/13

Using dictionaries and reference books construct adverbs, punctuate sentences.

MATHS 11/12

Covers geometry, algebra, statistics, symmetry, quadrilaterals and numbers.

MATHS 12/13

Covers fractions, transformations proportions, mental calculations.

FRENCH 11/12

Covers Verbs, Pronouns, Numbers 1-100, Days, Dates & Months and much more.

FRENCH 12/13

Features Time, Ordinal numbers, Price & Quantity, Future tense and much more.

FRENCH 13/14

Includes The verb avoir, The verb aller, Reflexive verbs, Money and much more.

£16.95 Each

or £32.00 for any two
or £47.00 for any three

COOMBE VALLEY SOFTWARE

Coombe Valley produce a range of educational adventure games which develop Reading, Keyboard Skills, Logical Thought and Planning. In addition, most of the games also improve specific skills in Maths, English etc.

Maths Dragons (5 to 12 years)

Cave Maze (8 to 13 years)

Reasoning with Trolls (5 to 12)

Fraction Goblins (8 to 13+)

Picture Fractions (7 to 10)

Tidy The House (5 to 9 years)

£12.95 Each

or £24.00 for any two
or £34.50 for any three

GRAPHICS SOFTWARE

Delux Paint ST £44.95
Spectrum 512 £22.95

WORD PROCESSORS

Protext V4.3 £39.95
Word Writer £36.95
First Word Plus V3.1 £39.95

PROGRAMMING

Hisoft Basic 2 £54.95
Tempus 2 £29.95
Hisoft C Interpreter £39.95
Lattice C Version 5 £99.95
Nevada Cobol (inc CPM emulator) £33.95
Hisoft Highspeed Pascal V1.5 £69.95
Hisoft WERCS Plus (inc GDOS) £33.95
NEW - Hisoft Devpac 3 £47.95

STOS - THE CREATOR

STOS - The Creator £19.95
STOS - Compiler £13.95
STOS - 3D £22.95
STOS - Creator & Compiler £29.95
The Game Makers Manual £11.95

DATABASES

SUPERBASE PROFESSIONAL

A fully relational database that can take graphic files as well as text.

91% Rating in ST Review October 1992

OUR PRICE £69.95

Data Manager Professional £29.95
Super Card 2 £24.95

MISCELLANEOUS

Concerto £29.95
Quartet V1.5 £36.95
Mini Office Communications £15.95
Harlekin 2 £39.95
Hisoft Diamond Back 2 £31.95
NEW - Hisoft Diamond Edge CALL
NEW - True Paint for Falcon 030 CALL
Forget Me Clock 2 £17.95

NEW - ROBOSHIFT

Auto sensing joystick/mouse switch box.

OUR PRICE £13.95

VIDI ST

Vidi ST & Vidi-Chrome £84.95
Rombo RGB Splitter £49.95
Vidi ST Complete Colour Solution £129.95

SPECIAL OFFER

PROTAR HARD DISC DRIVES

We currently have a limited stock of Protar 40 megabyte hard disc drives.

All disc drives come completely with 12 months warranty.

MJC PRICE ONLY £249.00

COURIER DELIVERY SERVICE

A next day courier delivery service is available on all orders - Prices start from £3.00 - Please call for details.



Snooker's faces have returned, by popular demand!



The ball graphics are different for each of the game types: this is the American 9-ball set.

ARCHER MACLEAN'S POOL

ATARI ST
ESSENTIAL BUY

Having already conquered the nation's snooker halls, Archer Maclean has now turned his hand to the popular pub pastime of pool. Cue: Gordon Houghton

Why bother buying a computer pool game when, for 50 pence a time, you can nip down to your local and play the real thing? There are three reasons. First, you might not have a local. Second, you won't get chalk dust up your nose and you won't get beaten up for thrashing the resident hot-shots on their own table. Third, and probably most important of all, **Archer Maclean's Pool** allows you to do things you would never be able to do in reality. Well, not in public, anyway.

A DIFFERENT BALL GAME

But first, let's get one thing straight. Those of you who haven't played **Jimmy White's Whirlwind Snooker** can skip to the next sub-heading... Right. Let's assume that there are plenty of you still here, and that you're all wor-

rying yourselves silly that **Pool** isn't worth the disk it's written on - because you think it's just like **Jimmy White's Snooker** but on a smaller table, because Archer Maclean didn't have to rewrite much of his 3D game engine, and because your immediate reaction looking at the pictures is "what a rip-off... mumble, mumble... greedy software houses... blah blah... it's just the same...", etc.

Well, you can rest easy, because you'll find that **Pool** is a whole different ball game. Consider these facts. **Pool** is 15,000 lines of code bigger than **Snooker**, it has five times as many opponents, there are three different sets of rules and a rule editor, there's a whole new system of Match, Practice and Tournament games, there's four times as much disk storage, there are two

new scoring systems, a hints screen for the controls, and much better presentation overall. In programming terms alone, **Pool** is better.

TABLE TALK

Having established that, let's get down to the game. Once you've taken your eyes away from the impressive randomly-generated title screen, the action begins at the main menu. The list of options is exhaustive here, so make sure you concentrate. The first two are probably the most important, allowing you to select the type of pool (8-Ball UK Table, 8-Ball US Bar Table and 9-Ball USA Tournament), and choose the type of game (two-player practice, one-/two-player game, one-/two-player match - that's the best of three, five, seven or nine games - and a tournament for up to eight players).

In addition you can edit the 8-ball rules (include/omit the



INSIDE INFO

Amiga owners will no doubt be disgusted to discover that their version of **Pool** runs 25 per cent slower than the ST. Archer Maclean explains: "The ST processor runs at 8 MHz and the Amiga runs at 7.1 MHz, so that's immediately a 12.5 per cent increase. When you actually get down to writing the game, the Amiga version needs to use offset indexed addressing, which adds half a microsecond for each instruction. On the

ST you can get away without having an offset - so that saves another 12.5 per cent. This effectively means that on the ST the game generally runs at around 17 frames per second (fps), and if the screen is static and the balls are rolling around it runs at a flat 25 fps. The Amiga can also achieve 25 fps, but the average is 13 fps."

'D', force nomination of the black pocket and determine how many balls must strike the cushion at break-off), set up a trick shot, enter the demo mode, access a table of disk features (save to and load from disk trick shots and games), and fiddle around with the options (access hints and icons help screens, erase disks and quit to the title screen).

Special mention should be made of the manual which guides you through all this. At 50 pages it's not so long that it sends you to sleep, nor so short that you're left wondering how to go about playing a basic shot.

Two-thirds of the manual is packed with illustrated instructions, whereas the rest is devoted to a full explanation of the rules of each game-type, a section on spin and swerve, and some handy advice. In fact, it's as comprehensive and entertaining as the game itself.

GIVE US A BREAK

OK, so you want to play a game. The process is simple, whatever your decision – for the sake of argument, let's assume that you want to play the UK 8-ball rules, and you want to take part in a five-game match against the computer. Making the appropriate selections from the menus, you suddenly come across a list of 20 opponents.

These players are part of *Pool*'s strength, and are neatly graded from real duffers to world-class pros who can clear up within two visits to the table. You get to know them as individuals, too – Miscue Mike keeps forgetting to chalk his cue, Pete Perfect tries too hard, Boring Bob takes ages to shoot, and Backspin Jim makes excessive use of screw. The only thing missing is a portrait of each player.

You've selected your opponent, you've entered your name, you've confirmed your choices – now it's down to action. The first thing that must be said about *Pool* is that it's fast. The 3D rotates effortlessly with barely a stutter, the ball movement is realistic, the computer takes very little time to make a tactical decision, and the range of controls is huge but easy to manipulate.

These immediate impressions are reinforced by the sampled sound effects which are, on the whole, excellent. The sound of a miscue or

STEP BY STEP



2 Having selected an opponent from the list of 20, an interim presentation screen confirms your choices. Don't chicken out just yet though – Disaster Dave is a bit of a dodo with the cue.

1 *Pool* is a simple game with a wide range of options. It begins with the main menu screen, where you decide what type of game you want to play and who you want to play against.



4 ...And this is the result. A power shot will scatter the balls all over the table – but if your intention is to play safe, nestling the white into the pack and sending a couple of balls to the cushion is preferable.

3 The break. Activate the viewline, rotate the view until you're happy, chalk up your cue, set the strength of your shot, decide whether you want to add a little spin, then let fly...



5 All being well – and your opponent being willing – you'll soon be ready to pot the black (or the 9-ball, if you're playing by alternative rules). No-one could miss a shot as easy as this – could they?



balls smashing into each other is brilliant, although the effects of balls rolling into the pocket or striking a cushion are less impressive – and the title tune is uninspiring.

Playing a shot is simple, and uses basically the same controls as *Snooker* did. The accuracy is astounding: you can alter the viewing angle in 1/64th of a degree increments (giving 23,040 angles around the ball), there are 81 spin-points and 88 levels of cue power, the positional accuracy is precise to 1/16th of a millimetre, and the collision and timing calculations are measured in microns and millionths of a second – which all adds up to 164 million shot options every time you pick up the cue.

Obviously, these statistics would be useless if playing a

shot was like escaping from a tar-pit. Luckily, Archer has made it as easy as falling into one on a dark night.

Pool, grossly oversimplified, is a case of potting balls. Once you've got the hang of this, you can become obsessed with one of the game's more unusual features: the score table. There are two types of score table, both of them roughly concerned with the same information – the number of good pots made, the total shots taken, any fouls made and the time needed for each shot. Broadly speaking, a combination of these factors gives you a percentage, and improving your percentages and times provides an incentive for self-improvement.

There's just one more thing to say here: once you've fin-



One of Pool's more subtle features: when you can't hit a ball full-face, the cue graphic moves to find the best point of contact.

The score table which differs according to the type of game you're playing – tells you how well you're performing.

	GORDON	JAMES
DATA		
GOOD-POTS	00	000
SHOTS	4	5
FOULS	0	2
TIME	2.15	1.09
ORDER	00000000	
RANKMETER		
	48 %	31 %
THIS IS A 1 PLAYER 2 ENTRY TOURNAMENT		

STEP BY STEP



- 1 Setting up a trick shot couldn't be easier. A combination of mouse and keys allows you to place the balls in circular clusters, straight lines, or anywhere on the table.



- 2 If you're not happy, you can delete individual balls or clear the lot. Once you're satisfied with the arrangement, you can play the shot as normal: viewline, spin, chalk and shot strength.



- 3 The result is a three-ball cannon – white onto the red-3 onto the 9-ball – with the 9-ball ending up in the pocket. Having practised this you can go on to more adventurous setups...



- 4 ...Such as this one. If you set the table correctly, multiple collisions can result in spectacular multiple pots. Fortunately, you can save trick shots to disk and show off to your friends.

BUYERS GUIDE

The ST isn't flooded with pool and snooker simulators, and many of those that have appeared in the past have now disappeared for good. These are Archer's two main challengers in the 3D world of cue sticks and super crystalate:

	Gra	Sou	Rea	Eas	Pla	Overall
Jimmy White's Snooker	9	7	9	8	9	92%
3D Pool (Rainbird)	7	5	7	6	7	64%

Key: Gra = Graphics, Sou = Sound, Rea = Realism, Eas = Ease of use, Pla = Playability

ICONOPHILIA



Pool's icon system allows you to control every aspect of a shot and to watch it being played from almost any angle. If you forget what to do you can always call up this helpful little screen, which gives you a brief summary of the main controls, including

keys. Every icon has a number of different functions according to the type of game being played and whether you use the left, right or both mouse buttons. However, these are the basic controls (from left to right): set strength of shot, chalk the cue, top spin, left spin, play shot, right spin, backspin, activate viewline, go to/follow cue ball, rotate view left/right/up/down, cycle through eight main viewing angles, access score information or compute best shot, access help or main menu, and undo shot (if in practice mode).

ished playing a basic game, you can always try out the eight-player tournament, the one-off game, the practice match, the trick shot editor and the demo mode. Comprehensive isn't the word. Then again, perhaps it is.

CUE TIPS

The presentation throughout is superb. As well as multiple functions for each icon, according to the combination of mouse buttons used, **Pool** provides plenty of bonus features. For example, at any time you can look at a controls hint sheet or a screen detailing the icons, you can position the icon menu at the top or the side of the screen, you can enjoy the action from a huge range of angles and overhead views, and save your positions in 60 saved game slots.

One of Archer Maclean's trademarks is his attention to detail, and **Pool** reflects this. Silly faces appear on balls when you take too long over a shot, there are blinking eyes in the background, the title

screen and tournament victory sequence are excellent, there are over 40 different messages detailing your progress and, of course, there's a hidden cheat mode. In fact, there are just too many features to cover adequately, even in a review of this length.

MORE BALLS THAN MOST

Pool has no major drawbacks, and you have to look hard to find even minor ones. Few people will mourn the absence of an action replay feature - particularly when you can save prospective shots to disk anyway - and even fewer will miss the bizarre and little-used rule-variations which haven't been included. You do only get one colour of table (green) instead of the exotic American favourites (blue and red), the computer break-off sequence isn't as sophisticated as in real life, and inevitably with a game that provides such a wide and flexible range of controls, the first few matches might



An on-screen reminder of control tips can be called up at any time.



The three most popular types of pool have been included, along with a brief rule editor for even finer tuning.

A simple tournament ladder adds extra depth - up to eight people can take part.

prove a little difficult. However, once you're accustomed to the icons you're hooked, and even the most fastidious gamers will find little to criticise.

Pool certainly deserves more than to be casually dismissed as a poor cousin of **Snooker** - it's a great game in its own right. Whether you've been playing the real thing for years or you don't know one end of a cue from the other,

you're in for a treat. It will take you a long time to discover everything, and even longer to exhaust the game's potential - but doing so will be a pleasure.

"The definitive pool simulator"

NAME: ARCHER
MACLEAN'S POOL
COMPANY: VIRGIN GAMES
CONTACT: 081 960 2255

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS: ○○○○○☆
SOUND: ○○○○○☆
VALUE FOR MONEY: ○○○○○○
PLAYABILITY: ○○○○○○

OVERALL 94%

Very fast, very smooth 3D
Three different sets of rules
Accurate simulation of ball collisions
20 well-graded opponents
Superb presentation
Loads of options

PROS AND CONS

No action replay feature
Some very minor compromises

RAMP

Running a castle isn't easy, as Mark Patterson discovered when he tackled Domark's constructive coin-op conversion

Very playable
Extremely addictive

PROS AND CONS

Sluggish controls
Crude graphics.

"Simple looking, but very playable strategy game"

NAME: RAMPART

COMPANY: DOMARK

CONTACT: 081 7802222

PRICE: £25.99

RELEASE DATE: OUT NOW

MIN MEMORY: 1 MB

GRAPHICS ★★☆☆☆

SOUND ★★☆☆☆

VALUE FOR MONEY ★★☆☆☆

PLAYABILITY ★★☆☆☆

OVERALL **80%**

Rampart originally started life as an Atari coin-op. The aim of the game, quite simply, was to build a castle while fending off attacks from neighbouring fortifications and pirates. What made it stand out was the peculiar mix of game-play styles. It took the shape-matching of games such as *Tetris* and mixed it with *Missile Command*-style action, to produce a highly playable game.

Now it's reached the ST courtesy of Domark, with all the original features of the coin-op. The game is divided into three stages, location hunting, cannon placing, attacking and rebuilding. Each section is played against the clock, with the time limited to just 10 seconds.

To make it through to the next round of the stage your castle must have at least one area completely enclosed with a wall, otherwise you lose a life.

The first step is to choose a likely site for your first castle. Every level takes place by the sea, and you're given five or six potential locations to build on. It's important to choose the right one, as picking a location close to the edge of the map or the sea will seriously limit the castle's potential growth.

CANNON FODDER

The next stage is to place the cannons. The number you're given depends on the amount of territory you hold. The person who holds the most cannons has a huge advantage over their opponent.

When the clock's run down on that part, the game moves into combat mode. Here you have to direct your cannon-fire against whatever enemy you're facing. This is done by positioning a cross-hair where you want the shot to land. The drawback is that each cannon can only fire one shot at a time. To help you keep track, the cross-hair shrinks when you have no shots available.



After the combat round the game goes into a *Tetris*-style mode. The aim of this stage is to rebuild your castle so that there are no gaps in the walls.

You're given a series of random shapes to do this. They can be rotated through 90° and placed anywhere on land, as long as no part overlaps the sea.

This section requires plenty of thought, as you can't simply stick the pieces down in a haphazard manner. All the gaps in the castle walls must be filled in, but because of the awkward shape of some of the pieces, you have to be careful that they don't take up too much space within the confines of the castle, otherwise you'll have no room to place the cannons.

There is an alternative to rebuilding your castle – you could try capturing one of your opponent's buildings. This is done by building a

wall around it, which takes quite a while, but once you've started doing this you leave the other player with the choice of either trying to save their own skin by halting your progress, or risking everything to destroy your castle before you capture his.

NEW GROUND

If your castle remains almost intact after a combat phase, you could consider building another one. The land is dotted with unused keeps, and building a wall around any one of those creates a castle. A second castle is not only good for attacking your enemy, but drawing fire away from your main one, which gives you time to expand it.

In a one-player game the threat comes from the sea. As soon as the foundations are laid, pirates sail into the nearby estuary and open up with their cannons. Their ships come in various shapes and sizes. To begin with your

Should the pirates make it to shore, they'll unload troops who will destroy your castle. Each successive level leaves more room for the pirates to attack.



ART



Although your castle's walls crumble at the onslaught, your cannons are indestructible.



It's game over if you leave any holes in your castle walls at the end of a turn. Once you've patched it up try to strengthen the forward walls.

construction is assaulted by simple gunships, which merely destroy walls and cause no real problems. Fight them off a few times and the black ships appear, which launch fireballs that devastate whatever they hit so utterly that it takes several turns to rebuild. Troop ships are a hazard that has to be dealt with early. If they reach the shore they unload foot soldiers who race towards your castle and tear down its wall.

The two-player game gives each person a castle, with a river running between them. The aim is to cause so much damage to your opponent's castle that he can't repair it in the allotted time. The player who can't patch theirs up loses. If both can't, the person who's built the most walls is the winner.

While this version retains all the features of the original game, it lacks the speed. The controls are often sluggish, which is irritating to begin with. After a few games, though, the speed won't be much of a problem.

INSIDE INFO

If you find yourself faced with a pirate onslaught, you should always make sure that you take aim at the front of their ships so that they move into the shot as they progress. It's important to work fast during the rebuild and cannon placement phases as the pirate ships start advancing as soon as the turn starts.

You must always aim for the troop ships first. If they make it to the shore the soldiers they're carrying will cause more damage than any cannon shell.

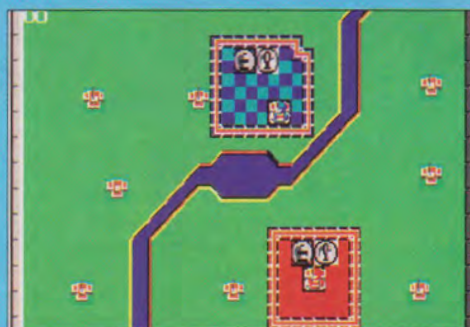
Expansion is another very important element of the game. After the first few waves more and more ships appear together, so you need to have as many cannons as possible to combat them.

It's not advisable to fire a salvo at one ship – you will find that it works much better if you fire a single shot at each vessel, then when you've shot at the final one, go back to the one that you fired on earliest.

STEP BY STEP



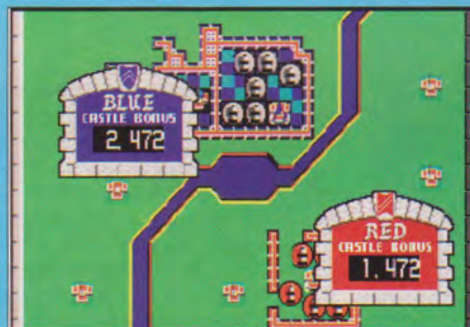
1 It's important to choose your site well. You need to have enough space to expand your castle. If you build too close to the sea or the border you'll have a hard time finding the piece you need to fill gaps there.



2 Place the cannons close to the front of the castle and as near to the walls as possible. Try not to waste any space: placing cannons becomes tougher when your castle is damaged.



3 When you launch a salvo against an enemy castle, always aim for the bits that will be the toughest to repair. These include corners and walls next to borders and the sea.



4 Always aim to expand. The second you've a battle-worthy wall, place pieces next to it. If you're in a situation where you can't build any more, reinforce walls which surround the cannons.



5 The key to winning is your ability to build, and being lucky with the various shapes. Always create enough space to place new cannons and keep an eye out for missing corner pieces.

LEEDS UNITED CHAMPIONS



England may have roasted Turkey, but how would you take a soccer team all the way to the top table? Steve Keen takes the manager's chair...



The steady flow of soccer sims that oozes out of software houses never ceases to amaze us reviewers. But whilst there are still supporters turning up to matches, not to mention the millions tuning into the game on TV you can bet your season ticket that they'll continue to seep out until the companies either run out of teams to endorse their products or we all take up synchronised swimming.

THE PLOT SLOT

The idea of this game is for you to take Leeds United from the bottom of the league to the top of the first division and then win the European Cup? Easy enough eh? And after all no-one else is going to do it!

As soon as you've loaded the game, a niggler hits you full in the face, leaving its foul taste tainting the rest of the game until you turn it off. Leeds United is only keyboard controllable, leaving you hunched over your desk tapping out furiously on the keys and flicking through the menus by hand. And there are a huge amount of menus. Every single icon seems to hide a Pandora's Box of tables, more tables and even more tables. There are options galore with enough menus to keep Delia Smith happy for months.

Given that this is a management sim, and the complexity of handling a professional football team is not like deciding what colour shirt to wear to work, it's going to take some time getting into. It's best to start off by checking through the recent results by using the Results Service

icon. Here you can scrutinise all the teams and their scores as well as who's been sticking balls into the onion bag the most, your weekly accounts and training reports, injuries and the like. Then it's on to the match side of the simulation as you move into Squad Selection. Each player has his own statistics. The temperament and morale of each 'star' is displayed and you can swap and choose where to place each man from the 20 positions. You can also enter them onto the transfer market from here or expand their skills by turning a defender into a mid-fielder. You can even give belligerent

so-and-sos the old heave-ho if they get too full of themselves or don't perform.

THE LOW DOWN

Each player's skill ranges from 11-99, their Temper from 1 to 99 and Morale from 0.1 to 9.9 and it's vital that you find the best combination of values for each player and their position.

This is the secret to success. If you over-delegate points in one field or under value another, players are liable to come a cropper on the field ruining the whole team's performance.

There are just so many aspects to this sim that you can't begin to explain them all, suffice to say that every aspect, including scouts, physio, youth-players and even mortgages from the local bank through the club, has been incorporated. This is where the game lets itself down a bit as it's so complex you can neglect the more important and fundamental reason for the sim, to win matches. However, if this type of thing appeals to you and you like ruining your eyesight by sticking your face right up to a monitor screen, then this is the footy sim for you. There are far better presented sims around, but few that are as deep.

More footy stats and menus than you can shake a referee's book at

PROS AND CONS

Exceedingly text orientated
Boring presentation

"Great depth and little action. One for bookworms only"

NAME: LEEDS UNITED CHAMPIONS
COMPANY: EMPIRE
CONTACT: 0268 541126

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS ★★★★★
SOUND ★★★★★
VALUE FOR MONEY ★★★★★
PLAYABILITY ★★★★★

OVERALL **69%**

Teamwork, is what it's all about. Keeping tabs on the fitness of your players is as important as turning out the best side.

Leeds Utd	S	
1. J. Lukic	27	Goalkeeper 27
2. M. Sterland	16	Defence 27
3. C. Farclough	30	Midfield 35
4. I. Dorigo	19	Attack 20
5. C. Whyte	39	Morale 4.0
6. D. Batty	34	Ave. Age 21
7. D. Rocastle	28	Temper 76
8. G. Strachan	39	Bank £272115
9. L. Chapman	12	Menu
10. R. Wallace	23	Change
11. E. Cantona	42	Edit
12. G. Speed	38	Tran
13. K. Shutt	19	Field
14. S. Hodge	31	Sack
15. Reserves		Info



This is the place to check out how your lads are doing. The higher the rating the more skills the players have, but try to get a balance.



EAGLE SOFTWARE

118a Palmers Road
New Southgate
LONDON N11 1SL

(10 am - 6pm 6 days)

Tel: 081-361 2733/5730

(2733 Faxline after 6pm)

CREDIT CARD HOTLINE:



081 889 9172

SPECIAL
NEW YEAR
OFFER
10% OFF
ORDERS OVER
£75

ST & AMIGA BUDGET TITLES UNDER £10

1 Meg Cricket (Amiga only)	£3.99	F16 Combat Pilot	£7.99	Pintoon	£5.99
3D Pool	£6.99	Gauntlet II	£6.99	Predator	£8.99
Afterburner	£6.99	Ghostbusters II	£6.99	Predator II	£9.99
Altered Beast	£6.99	Ghouls'n Ghosts	£6.99	Rain Bo III	£8.99
Arkanoid	£6.99	Golden Axe	£6.99	Resolution 101	£8.99
Barbarian	£6.99	Hard Drivin'	£6.99	Rolling Ronny	£8.99
Barbarian II	£6.99	Head over Heels	£6.99	Run The Gauntlet	£6.99
Battlehawks 1942	£6.99	H. H. Guide to Galaxy	£7.99	Shadow of the Beast	£6.99
Beach Volley	£6.99	IK+	£6.99	Shadow Warrior	£6.99
Blood Money	£6.99	Impossible Mission II	£6.99	Sherman M4	£6.99
Cabal	£6.99	James Pond	£6.99	Shinobi	£6.99
California Games	£6.99	Jet Set Willy (Amiga only)	£7.99	Shuffle Puck Cafe	£6.99
Carrier Command	£6.99	Kid Glove	£5.99	Speedball	£7.99
Carve Up	£7.99	Last Ninja II	£6.99	Starfighter II	£6.99
Celica GT4 Rally	£6.99	Lombard RAC Rally	£6.99	Stunt Car Racer	£6.99
Centriford Square	£6.99	Lotus Esprit	£6.99	Supaplex	£6.99
Cloud Kingdom	£6.99	Manic Miner (Amiga only)	£7.99	Super Hang On	£6.99
Colossus Chess	£6.99	M. Jackson Moonwalker	£6.99	Switchblade	£6.99
Combo Racer	£6.99	Moonshine Racers	£6.99	Tenacious Mutant Turtles	£6.99
Conflict In Europe	£7.99	Narc	£6.99	Thunderstrike	£6.99
Confidential Circus	£5.99	New Zealand Story	£6.99	Tobin	£6.99
Defender of the Crown	£7.99	North & South	£6.99	TV Sports Football	£7.99
Deluxe Strip Poker	£6.99	Out Run	£6.99	Vigilante	£6.99
Double Dragon I or II	£6.99	Operation Thunderbolt	£6.99	War Zone	£6.99
Dragon Ninja	£6.99	Operation Wolf	£6.99	Waterford	£6.99
Fantasy World Dizzy	£5.99	Pang	£6.99	Wings of Fury (Amiga only)	£6.99
		Panza Kick boxing	£6.99	WC Leaderboard	£6.99
				Xenon II	£7.99

TOP TITLES	ST	AMIGA
A500+ 1 Meg Upgrade	N/A	£39.99
A800 1 Meg Upgrade + clock	N/A	£49.99
0.5 Meg Upgrade + clock	N/A	£25.99
3D Construction Kit II	£36.99	£36.99
4D Sports Boxing	N/A	£11.99
4D Sports Driving	N/A	£11.99
A-Train	N/A	£23.99
Action Stations	£12.99	£12.99
Addams Family	£16.99	£16.99
Agony	£15.99	£15.99
Air Support	£15.99	£15.99
Aliens III	£16.99	£16.99
A. Maclean's Pool	£16.99	£16.99
AMNIO	£15.99	£12.99
Amos (Easy)	N/A	£23.99
Amos 3D	N/A	£23.99
Amos Compiler	N/A	£19.99
Amos Professional	N/A	£54.99
Amos The Creator	N/A	£36.99
Another World	£17.99	£17.99
Apkja	£16.99	£9.99
Aquatic Games star J Pond	£16.99	£16.99
Aquaventure	N/A	£13.99
Armourededdon	£15.99	£15.99
Armourededdon Upgrade*	£10.99	£10.99
Ashes of Empire	£20.99	£20.99
Assassin	N/A	£16.99
A.T.A.C.	£23.99	£23.99
ATOMINO	£8.99	£8.99
B17 Flying Fortress*	£23.99	£23.99
Bane of the Cosmic Forge	N/A	£24.99
BARBARIAN II (Peyg)	£12.99	£14.99
Bard's Tale III	N/A	£8.99
Bards Tale Trilogy*	N/A	£19.99
B.A.T. II	£22.99	£22.99
Battle Chess II	N/A	£16.99
Battle Isle	£16.99	£16.99
Battle Isle Data Disc	N/A	£13.99
Battle Toads	£16.99	£16.99
Big Run	£15.99	£12.99
Birds of Prey	N/A	£23.99
Black Crypt	N/A	£16.99
Blue Max	N/A	£11.99
Bountiful HD Scenery	N/A	£13.99
Buck Rogers	£16.99	£16.99
Buck Rogers II	N/A	£20.99
Cadaver	£16.99	£11.99
Cadaver - the pay off	£10.99	£10.99
Captive	£16.99	£16.99
Carl Lewis Challenge	£15.99	£15.99
Castles	£16.99	£16.99
Castles Data Disc	£11.99	£11.99
Castle of Dr Brain	N/A	£15.99
Chase Engine	£16.99	£16.99
Chase HQ	£6.99	£6.99
Chase HQ II	£14.99	£14.99
Chuck Rock	£7.99	£7.99
Civilisation	£23.99	£23.99
C.Y.'s Air Combat	£20.99	£20.99
Codename Ice Man	£12.99	N/A
Cool Croc Twins	£16.99	£16.99
Cool World*	N/A	£16.99
Conflict Korea	N/A	£23.99
Contraptions*	N/A	£18.99
Cover Girl Poker	N/A	£16.99
Covert Action	£23.99	£23.99

TOP TITLES	ST	AMIGA
Crazy Cars III	£16.99	£16.99
Cruise for a Corpse	£17.99	£17.99
Curse of the Enchanter	N/A	£23.99
Cytron	£18.99	£18.99
Darkmere	£16.99	£16.99
Das Boot	N/A	£11.99
Days of Thunder	£12.99	£8.99
Deliverance	£15.99	£15.99
Desert Strike	N/A	£16.99
DJ Generation	£11.99	£11.99
Disciples of Steel	£17.99	£17.99
Doodlebug	£16.99	£16.99
Double Dragon III	£16.99	£16.99
Dreadnoughts	£22.99	£22.99
Duel	£8.99	£8.99
Dune	£19.99	£19.99
Dungeon / Chase	£19.99	£19.99
Dungeonmaster	£11.99	N/A
Dyna Blast	£20.99	£20.99
Elf	£12.99	£12.99
Elvira Mistress Dark	£21.99	N/A
Evil II - Cerberus	£23.99	£23.99
Epic	£19.99	£19.99
Eye of the Beholder	N/A	£19.99
Eye of the Beholder II	N/A	£23.99
F14 Tom Cat	£18.99	£18.99
F15 Strike Eagle II	£23.99	£23.99
F17 Stealth Fighter*	£21.99	£21.99
F19 Stealth Fighter	£19.99	£19.99
F20 Retaliator	£15.99	£15.99
Face Off - Ice Hockey	£15.99	£15.99
Falcon Classic Collection	£11.99	N/A
Falcon	£11.99	£11.99
Falcon Mission Disk I	£8.99	£8.99
Falcon Mission Disk II	£8.99	£8.99
Falcon 3.0*	£23.99	£23.99
Fantastic Voyage	£16.99	£16.99
Fate of Atlantis (Adv)	N/A	£25.99
Fate of Atlantis (Arc)	£16.99	£16.99
F. of Free Traders	£8.99	£8.99
Final Blow	£16.99	£16.99
Final Fight	£16.99	£16.99
Fire and Ice	£15.99	£15.99
First Samu/Megaloman	£20.99	£20.99
Firestorm HD Scenery	N/A	£13.99
Flashback*	£16.99	£16.99
Flight of the Intruder	£11.99	£11.99
Floor 13	£19.99	£19.99
Football Crazy	£14.99	£14.99
Football Manager III	£14.99	£14.99
Free DC	N/A	£18.99
Future Wars	£8.99	£8.99
Gauntlet III	£16.99	£12.99
Global Effect	£16.99	£16.99
Goblins	£16.99	£16.99
Gods	£16.99	£16.99
Go for Gold	£8.99	£8.99
Golden Shot	£16.99	£16.99
G. Gooch Cricket	£21.99	£21.99
Graham Taylor	£15.99	£15.99
Grand Prix (Formula)	£23.99	£23.99
Gunship 2000*	£21.99	£21.99
Guy Spiry	N/A	£20.99
Harlequin	£16.99	£16.99
Harpoon (1 Meg)	N/A	£19.99
Harrier Assault AV8B	£23.99	£23.99

TOP TITLES	ST	AMIGA
Heimdal	£23.99	£23.99
Hero's Quest (Grem)	£16.99	£16.99
Hill Street Blues	£15.99	£15.99
Hoi	N/A	£15.99
Home Alone	N/A	£23.99
Home Alone Colouring Book	N/A	£14.99
Hock	£15.99	£15.99
Hudson Hawk	£8.99	£8.99
Humans	N/A	£19.99
I. Bothams Cricket	£19.99	£19.99
Indy Heat	£16.99	£16.99
Indy Last Crusade Graphic	£8.99	£8.99
International Sports Chail	£16.99	£16.99
Ishar - Legend Fortress	£20.99	£20.99
Jack Nicklaus Unlimited Clip	N/A	£10.99
Jaguar XJ220	£16.99	£16.99
Jim Power*	£16.99	£16.99
J. Khan Squash	£8.99	£8.99
J. White's Whirlwind	£16.99	£16.99
J. Barnes (1 Meg)	£15.99	£15.99
J. Madden's Football	N/A	£16.99
KGB*	£20.99	£20.99
Kick Off II (1 Meg)	£9.99	£9.99
Kick Off II (5 Meg)	N/A	£14.99
Kick Off III	£16.99	£16.99
Kid Gloves II	£16.99	£16.99
KILLING GAME SHOW	£15.99	£8.99
Kings Quest V	N/A	£15.99
Knights Quest - Hint Book	£19.99	£19.99
Knight of the Sky	£23.99	£23.99
Last Ninja III	£7.99	£7.99
Lawn Mower Man*	£16.99	£16.99
Leander	£15.99	£15.99
Leathal Weapon	£16.99	£16.99
Legend + Hint Book	£19.99	£19.99
Legend of Kyandia	N/A	£20.99
Legends of Valour	£25.99	£25.99
Leisure Suit Larry I	£12.99	N/A
Leisure Suit Larry II	£14.99	£14.99
Leisure Suit Larry III	£20.99	£20.99
Leisure Suit Larry V	N/A	£26.99
Lemmings	£15.99	£15.99
Lemmings and Data Disk	£19.99	£19.99
Lemmings II*	£21.99	£21.99
Lemmings - Data Disk	£13.99	£13.99
Lemmings - Stand Alone	£15.99	£15.99
Life and Death II	N/A	£20.99
Liquid HD	N/A	£23.99
Liquid Kicks*	£16.99	£16.99
Lost Patrol	£15.99	£12.99
Lost Treasures of Inconce	N/A	£29.99
Lotus Turbo Challenge II	£16.99	£16.99
Lotus Turbo Challenge III	£16.99	£16.99
Lure of the Tempress	£19.99	£19.99
M1 Tank Platoon	£19.99	£19.99
Magic Pockets	£15.99	£15.99
Man Unt. Europe	£15.99	£15.99
M. Dittie Ultimate Football*	£18.99	£18.99
Mega Fortress	£19.99	£19.99
Mega Sports	£16.99	£16.99
Megatreveller II	£20.99	£20.99
Merchment Colony	£16.99	£16.99
Microprose Golf	£23.99	£23.99
Midnight Resistance	£8.99	£8.99
Midwinter	£9.99	£9.99
Midwinter II	£23.99	£23.99

TOP TITLES	ST	AMIGA
Mig 29 Fulcrum	£16.99	£16.99
Might of Magic III	N/A	£23.99
Monstone	£19.99	£19.99
Monkey Island	£15.99	£15.99
Monkey Island II	N/A	£25.99
Mouse (Switchable)	£16.99	£16.99
Navy Seals	£8.99	£8.99
N. Mansell World Champ	£20.99	£20.99
Nova Nine	N/A	£9.99
ORBITUS	£12.99	£12.99
Ork	£15.99	£15.99
Outlanders*	N/A	£19.99
Pacific Islands - T.Yanket	£20.99	£20.99
Paperboy II	£16.99	£8.99
Parasol Stars	£15.99	£15.99
Perfect General	N/A	£20.99
PGA Golf Tour*	N/A	£20.99
PGA Courses Disk	N/A	£10.99
Pinball Dreams	N/A	£15.99
Pinball Dreams II	N/A	£16.99
Pilgrimage	£9.99	£9.99
Plotting	£8.99	£8.99
Populous II - The Challenge	£11.99	£11.99
Populous II + (1 Meg)	£23.99	£23.99
Premiere	N/A	£20.99
Prince of Persia	£15.99	£15.99
Pro Tennis Tour	£8.99	£8.99
Project X	£16.99	£16.99
Push Over	£15.99	£15.99
Putty	£16.99	£16.99
Puzznik	£8.99	£8.99
QUEST AND GLORY	£15.99	£15.99
Raided Tycoon	£23.99	£23.99
Rainbow Islands	£8.99	£8.99
R.B.I. 2 Baseball	£15.99	£15.99
Red Baron	N/A	£15.99
Red Zone	£15.99	£15.99
Rise of the Dragon	N/A	£15.99
Risky Woods	£16.99	£16.99
Robin Hood	£16.99	£16.99
Robocop	£15.99	£15.99
Robocop	£8.99	£8.99
Robocop II	£8.99	£8.99
Robocop III	£16.99	£16.99
Robo Sports	N/A	£23.99
Rod Land	£16.99	£16.99
Rookies*	£16.99	£17.99
R-Type II	£14.99	£14.99
Rugby World Cup	£15.99	£15.99
R.V.F. Honda	£8.99	£8.99
Sabre Team	£16.99	£16.99
Savage Empire	N/A	£22.99
Secret Silver Blues	£21.99	£21.99
Secret Weap Luft*	£19.99	£19.99
Sensible Soccer 92-93	£16.99	£16.99
Shadowlands	£20.99	£20.99
SHADOW BEAST II	£12.99	£12.99
Shadow of the Beast III	N/A	£18.99
Shadow Works	£16.99	£16.99
Shoot em up Con. KR	£7.99	£7.99
Shuttle the Sim	£20.99	£20.99
Silent Service II	£23.99	£23.99
Sim Ant	N/A	£22.99
Sim Earth	£23.99	£23.99
Simmons	£15.99	£15.99

TOP TITLES	ST	AMIGA
Sleepwalker*	£15.99	£15.99
Smash TV	£8.99	£8.99
Snow Bros	£16.99	£16.99
Soccer Kid	£16.99	£16.99
Space 1889	£20.99	£20.99
Space Ace II	N/A	£33.99
Space Gun	£12.99	£12.99
Space Crusade	£16.99	£16.99
Space Quest I,II,III, or IV	N/A	£23.99
Special Forces	£23.99	£23.99
Speedball II	£15.99	£15.99
Steel Empire	£20.99	£20.99
Stereo Master	£26.99	£26.99
Storm Master	£16.99	£16.99
Street Fighter II	£16.99	£16.99
Strike Fleet	£16.99	£16.99
Striker	£16.99	£16.99
Super Cars II	£8.99	£8.99
Super Road	£9.99	£9.99
Super Space Invaders	£16.99	£10.99
Super SWIV*	£16.99	£16.99
Supremacy	£18.99	£19.99
Switch Blade II	£8.99	£9.99
Sword of Honour	N/A	£16.99
Take Away Thomas	N/A	£15.99
Tennis Cup 2	£16.99	£16.99
Terminator II	£15.99	£15.99
Test Drive III	N/A	£15.99
The Games '92 Espana	£20.99	£20.99
Their Finest Hour	£16.99	£16.99
The Manager	£20.99	£20.99
ThunderhawkAH-73M	£21.99	£21.99
Thunder Jaws	£16.99	£16.99
Turf Off	£16.99	£16.99
Troiki	£15.99	£15.99
Trodders	N/A	£16.99
TV Sports Baseball	N/A	£11.99
TV Sports Boxing	N/A	£11.99
Turrican II	£7.99	£7.99
Twilight 2000	£22.99	£22.99
Ultima I	N/A	£15.99
Ultima II: Martian Dreams*	£20.99	£20.99
Ultima V	£19.99	£19.99
Ultima VI	£20.99	£20.99
UIMS II	£23.99	£16.99
UIMS II Planet Editor*	£20.99	£20.99
Universal Masters	£16.99	£16.99
Untouchables	£8.99	£8.99
Uridium II*	N/A	£17.99
Utopia	£16.99	£16.99
Utopia New World	£8.99	£8.99
Viking Kid	£15.99	£15.99
Viking Fields of Conquest	£16.99	£16.99
Volfied	£10.99	£10.99
Vroom	£16.99	£16.99
White Death (1 Meg)	£12.99	£12.99
White Wheels	£14.99	£7.99
Wily Beamish	N/A	£15.99
Wily Commander I	N/A	£16.99
Wiz Kid	£16.99	£16.99
World Championship Boxing	£16.99	£16.99
World Chess	£8.99	£8.99
W.W.F.	£15.99	£15.99
W.W.F. II	£15.99	£15.99
Zak McKracken	£8.99	£8.99
Zool	£16.99	£16.99



The two numbers in the centre of the screen show the health and number of action points of the currently selected soldier.

The game is entirely mouse driven, so there are loads of icons to learn. Fortunately, the lack of a time limit means that you can keep going back to the manual to make sure you don't make any stupid mistakes.



As soon as you spy an enemy soldier you have to open fire. If you confront one without enough action points there's a good chance he'll spot you when it's his turn and fire on you.



Krisalis' latest strategy game sees you leading an SAS squad. Mark 'Major' Patterson takes command. . .

SABRE

INSIDE INFO

Because your men can see and hear beyond the visible screen area, a system of arrows is used to tell you what's going on. Should one of your people hear something, a blue arrow lights up, pointing in the direction of the sound. This is useful – if they can hear someone just around the corner a well-placed grenade will put paid to any surprises they might have had in store. If they see someone the arrow turns red, although the

further away they are smaller than chance you man has of getting and accurate shot in. Additionally bullets do less damage over longer distances, so it's worth saving ammo and closing in when it's your turn.

Whenever there are hostages to be rescued and machine guns being waved in the name of Allah, newspapers start mentioning the SAS. But what do we know about this elite regiment?

Is it really true that they stalk the lonely moors that are their training grounds, smeared in animal droppings with knives clenched in their collective jaw?

Sabre Team gives you a chance to take a squad out on a series of dangerous missions. As the commander you get the chance to send your men to death or glory in five different missions. The first, and therefore the easiest, is a simple matter of rescuing some POWs from a prison deep in a jungle. The other missions include storming an embassy where hostages are being held, wiping out a nuclear command centre, freeing hostages on a hijacked ocean liner and finally destroying a middle-eastern nuclear weapons factory. Whilst all these missions have vastly



different settings and objectives, they have one common theme – kill anyone who gets in your way.

EQUIPMENT

Naturally no self-respecting team of SAS hard-nuts could be seen without the last word in military hardware. Indeed, before they set out on a mission you have to equip your men from a sizeable arsenal of assault rifles and sub-machine guns, all of which are based on real weapons that are supposedly used by the SAS. Ammunition also has to be taken in to considering when equipping your men as not all weapons fire the same size bullets. You could, for instance, arm them all with similar hardware so they can trade magazines, or choose a varied selection and rely on enemy soldiers to be carrying spare ammo that your men can pilfer.

Each mission requires four soldiers drawn from your initial squad of eight. Every character has different strengths and weaknesses in areas such as marksmanship

and perception. If a soldier is killed during a mission you don't get a replacement for the next one, so it pays to save the game regularly to avoid losing your super-trooper. Before they embark on their killing spree you have to position them on the game map. You're shown several potential start locations and it's down to you to work out which place will give you the greatest element of surprise over your enemies.

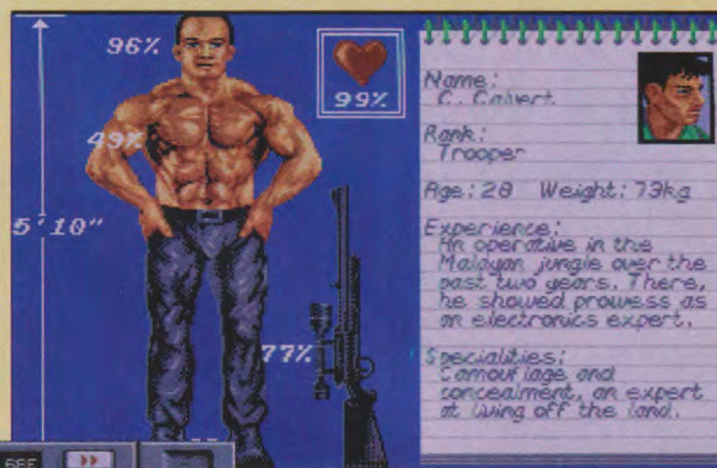
BALANCING ACT

The control system is very clever, balancing detail with ease of use. Rather than have all your men and the computer-controlled troops going at each other simultaneously, they take it in turns. Each soldier is allocated a set number of action points each turn. These are 'spent' when you move them, reload or fire a weapon or instruct them to perform some other action. When their points are used up, control switches to the next person. Once you've finished with your team it's the computer's turn. If you end a soldier's turn without using



It's always risky entering a building as you never know what's lurking behind through the doorway. The best thing to do is to go in with as many action points as possible to give your man a fighting chance.

Checking the map is essential on the rescue missions, otherwise you'll end up getting confused and searching the same rooms twice.



Each soldier has a different set of statistics. Some are stronger than others which comes in handy when there's a lot of fighting, while it pays to select a sharp-shooter if there are civilians involved.

TEAM

all their action points, they go into opportunity mode: should any computer trooper wander into his line of sight, your guy gets a free shot.

REALISM

What your, and the computer's, men see and hear is important. Just as in real-life they can't see around corners or through walls, so you only get to see what your people can see from their positions. Likewise with sound, the noise made by a gunshot only travels so far, and if any computer soldier hears it he'll be alerted to your presence. Obviously a large amount of the game is centred around your men shooting anything that moves, but from your point of view it isn't as simple as just pointing a gun and pulling the trigger.

If there's an enemy soldier in the field of view of one of your men the first step is to target a crosshair over him. There are two types of shot, a snap shot which is a burst of bullets that is moderately accurate and an aimed shot, which is one bullet only, but far more precise.

The advantage of a snap shot is that if your man has plenty of action points and is facing several soldiers that are close together he can have a crack at taking them all out. Of course, if he fails he's left standing with an empty weapon and not enough action points to run. There are some single shot guns which can only fire one bullet at a time before needing to be reloaded, so they carry a high risk factor which makes them only worthwhile if you have a good marksman in your team.

On top of the guns there are two types of grenades. The first is your standard flatten-everything-type high-explosive device, which takes out everything over a certain area, including friendly troops who don't run fast enough. CS gas canisters can also be employed. These come in particularly handy for the hostage missions where you need to take out terrorists without harming their civilian prisoners. These weapons do take quite a few action points to use, though. There's no use chucking a

grenade without pulling the pin out first, so you have make sure that you man has enough action points left after doing this to avoid becoming a vaguely soldier-shaped imprint on the wall.

GRAPHICS

The graphics, on the whole, are well suited to the game. The isometric view-point makes it easy to manoeuvre your men to suitable cover and the character sprites are very good indeed.

Getting used to the mounds of animated icons in the game does take quite a long time, but fortunately your turns are not time-limited, so there's plenty of opportunity to find your feet.

There are a few less violent commands available. Stealth instructs a soldier to move as quietly as possible, although moving in this way requires more action points. Items can be traded between troops, and options such as 'panic' and 'run away' will ensure that your men, while not earning any bravery commendations, will be there for the next missions.

"Very playable and involving strategy blast"

NAME: SABRE TEAM
COMPANY: KRISALIS
CONTACT: 0709 372 290

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY: 0.5 MB

GRAPHICS ★★★★★
SOUND ★★★★★
VALUE FOR MONEY ★★★★★
PLAYABILITY ★★★★★

OVERALL **84%**

I suppose it's fair to describe **Sabre Team** as an action game for people who like their action in small, easy-to-manage chunks. When it comes to relinquishing control to the computer for its go I find myself itching for it to finish its turn, so I can set about causing it even more grief.

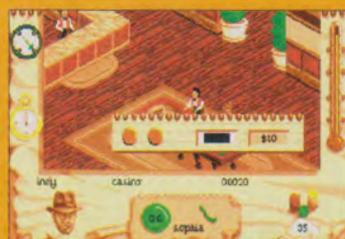
If you've ever seen **Rebel Star Raiders** or **Laser Squad** you'll know what to expect from this game. If you haven't, this is the perfect way to welcome the New Year with a bang.



The picture you get while waiting for the casino to load in.



Change some of your money to play the crooked roulette tables.



Have a bet. See if you can work out the crooked system, then you could win some money.



All of the men seem to be bad guys. Beat them up and they drop money and chocolate.



Just keep wandering. There MUST be some light at the end of the tunnel!



This girl has a very good way of disabling nasty men when they try and stop her.



One of the later stages. By the way, I had to use the demo mode to get this far!



Game over. This is how it's reported in the press.

INDIANA JONES

AND THE FATE OF ATLANTIS

Indy returns in this, the latest game featuring our hero. Some say that sequels are never as good as the original. Tony Kaye finds out if this really is the case...

"Lack of control and poor game-play make this a real letdown"

NAME: INDIANA JONES AND THE FATE OF ATLANTIS
COMPANY: US GOLD
CONTACT: 021 625 3388

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS ★★☆☆☆
SOUND ★★☆☆☆
VALUE FOR MONEY ★★☆☆☆
PLAYABILITY ★★☆☆☆

OVERALL 40%

It is 1938. Indiana Jones, archaeologist extraordinaire and star of many an adventure, has just obtained two treasures that could prove to be the key to the existence of the legendary land of Atlantis. In time-honoured fashion, however, Indy doesn't get much time to investigate his latest finds before he's hit over the head and has them stolen.

THE VILLAIN

The thief turns out to be Klaus Kerner, a Nazi agent acting for Dr. Hans Ubermann, who was working on a theory that certain beads contained enormous energy. The beads, called orichalcum, can only be found in the mystical land of Atlantis. Together with his colleague, Sophie Hapgood, our hero travels to Monte Carlo to find Alain Trottier, an antiques dealer, who they hope can help them trace the thief before it's too late. The Fate of Atlantis is in the hands of Indy and Sophie.



GAMEPLAY

The first scene is in the casino. Controlling each player individually, you can use the mouse, keyboard or a joystick to move Indy and Sophie around the building, fighting the bad guys and playing roulette as they go. There are treasure chests hidden behind chairs and in the basement, together with lamps and clipboards and other items you may need in your search.

JUST REWARDS

Beating up the baddies that block your path may gain you chocolate or money. The money can be gambled in the casino and used to buy weapons and other essentials needed later in the game, whilst the chocolate will provide you with the energy to keep going.

DISPLAY

The screen is displayed as a 3D type action screen with a

health meter, compass, timer, selected character, other character status and inventory item. The characters move from one side of the screen to the next when the action stops for the play area to catch up with the current position. If there is more to this game, it's buried so deep that even an archaeologist like Indy would have trouble digging it up!

It's a shame to see what could potentially be a very good adventure game ruined by slow gameplay and relatively poor graphics.

Hard disk installable

PROS AND CONS

Slow gameplay
 Lack of excitement
 Poor scrolling

FREE! FROM SILICA



When you buy your new Atari 520, 1040 or Mega ST-E computer from Silica Systems, we will give you an additional £324.75 worth of software FREE OF CHARGE, including some great entertainment and productivity programs. These free gifts will introduce you to the world of ST computing and help you to get off to a flying start with your new ST. Plus, with every ST and TT, we will give you 16 nights holiday hotel accommodation for you and your family to enjoy a break at home or abroad.

TENSTAR PACK:

ASTERIX	£24.99
CHESS PLAYER 2150	£24.95
DRIVIN' FORCE	£19.95
LIVE AND LET DIE	£19.99
ONSLAUGHT	£24.99
PIPE MANIA	£19.99
ROCK DANGEROUS	£24.99
ROCK 'N' ROLL	£19.99
SKWEEL	£19.99
TRIVIAL PURSUIT	£19.95

PRODUCTIVITY PACK:

1st WORD*	£59.99
Word processing package from GST	
SPELL IT	£19.99
Spelling checker to complement 1st Word	
ST BASIC	£24.99
Basic programming language with tutorial	

TOTAL VALUE: £324.75

16 NIGHTS HOLIDAY HOTEL ACCOMMODATION

Every Atari ST from Silica comes supplied with a free 72 page colour brochure with accommodation vouchers. These entitle 2 people to stay up to a total of 16 nights in any of 250 hotels with accommodation FREE. All you have to pay for are your meals (prices are listed in the brochure).

WORTH NEARLY

£325!

*Not supplied with STs where Atari pack already includes 1st Word

ATARI TT



NEW LOW PRICE

MONITOR OPTIONAL EXTRA

- 32MHz 32-Bit 68030 Processor
- 3 1/2" 1.44Mb Double Sided Disk Drive
- 2/4/8Mb RAM Versions
- Stereo 8-Bit PCM Sound Output
- 4096 Colour Palette
- Built-in 68882 Maths Co-Processor
- Up to 1280 x 960 Resolution
- VME + SCSI Expansion Ports
- Expandable to 36Mb RAM
- Hard Drive Expansion Options
- FREE 16 Nights Holiday Accommodation

2Mb RAM	4Mb RAM	8Mb RAM
£899	£1199	£1499
STC 8925	STC 8939	STC 8977

MEGA STE



NEW LOW PRICE

MONITOR OPTIONAL EXTRA

- 16MHz 16-Bit 68000 processor
- 3 1/2" 1.44Mb Double Sided Disk Drive
- 2Mb RAM
- Hard Drive Options Available
- 4096 Colour Palette
- Stereo 8-Bit PCM Sound Output
- FREE Silica Productivity Pack
- FREE TenStar Games Pack
- FREE 16 Nights Holiday Accommodation

SPECIAL PROMO PRICE!
2Mb MEGA ST-E (No hard drive)
RRP £708.35
SILICA PRICE **£449**
Inc VAT - Ref: STC 8433



MONITOR OPTIONAL EXTRA

The new Atari Falcon 030 is here! It is a powerful, versatile, multipurpose home computer, offering unmatched performance for its price. Included in its advanced specification are multiple co-processors for sound and graphics, true colour displays from a pallet of over a quarter of a million colours and 16-bit stereo sound input for speech recognition and sound sampling. These all combine to provide a new computer capable of running unrivalled sound, graphics and multimedia applications. The Falcon is an ideal upgrade for Atari ST owners who are looking for a more powerful model, as it is compatible with the majority of ST application software.

NEW ATARI ST PRICES

PLUS! FREE GIFTS FROM SILICA!
SEE PANEL TO LEFT

NEW! REVISED PACK 520ST-E DISCOVERY XTRA

HARDWARE:
520ST-E COMPUTER £249.99
8MHz 16-Bit 68000 CPU, 512K RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive

SOFTWARE - ARCADE GAMES:
Final Fight - A superb street fighting game £25.99
9 Lives - Cartoon quality platform romp £24.99
Robot Monsters - Arcade Shoot 'em Up £19.99
Sim City - Take control of your own city £29.95

BONUS ARCADE GAMES:
Missile Command £9.99
Crystal Castles £9.99
Super Breakout £9.99
Battlezone £9.99

SOFTWARE - PRODUCTIVITY:
Neochrome - Art package £29.99
1st Word - Word processor £59.99
First BASIC - Programming language £49.99
ST Tour - Tutorial Disk FREE
ANI ST - Animation Package £29.95

PLUS! FREE FROM SILICA:
Silica Productivity Pack £44.98
TenStar Games Pack £219.78

Total Value: **£825.55**
Less Pack Saving: **£576.55**
SILICA PRICE: **£249.00**

*Does not include 1st Word

£249

Inc VAT - Ref: STC 6300



PLUS! 4 BONUS

BATTLEZONE
CRYSTAL CASTLES
MISSILE COMMAND
SUPER BREAKOUT
ARCADE GAMES
WORTH £39.96



1040ST-E MUSIC MASTER

The Music Master Pack features one of the most popular computers used by musicians combined with the renowned MIDI package PRO 24 III to provide a perfect environment for novice and professional alike. The acclaimed MIDI Recording and Editing System from Steinberg, PRO 24 III is used by many top musicians including Dire Straits and P.W.L. Using any MIDI keyboard, PRO 24 offers the ability to write and compose music to a very high standard. You can record up to 24 tracks simultaneously, and then apply real time editing to remove mistakes.

HARDWARE:
1040ST-E COMPUTER £299.99
8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive

SOFTWARE:
PRO 24 III £150.00

PLUS! FREE FROM SILICA:
Silica Productivity Pack £104.97
TenStar Games Pack £219.78

Total Value: **£774.74**
Less Pack Saving: **£475.74**
SILICA PRICE: **£299.00**

NEW! LOW PRICE

£299

Inc VAT - Ref: STC 1261

NEW! 1040ST-E FAMILY CURRICULUM II



HARDWARE:
1040ST-E COMPUTER £299.99
8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive

SOFTWARE MODULES:
PLAY AND LEARN - A Game with Words and Sentences £76.59
JUNIOR SCHOOL - Answer Book/General Knowledge Quiz, Spelling and Primary Maths £58.54
GCSE - Micro Maths, French, and Geography Quiz £55.54
HYPER PAINT - Full Colour Paint Package £39.99
MUSIC MAKER II - Music Creation Software £49.99
FIRST BASIC - Powerful Programming Language £49.99
1st WORD - Very easy-to-use Word Processor £59.99
ANI ST - Animation Package £29.95

GAMES
9 LIVES - The ultimate in playability! - help Bob Cat save Claudette £24.99
PRINCE - Do battle in this tenth century game of warfare £24.95

PLUS! FREE FROM SILICA:
Silica Productivity Pack £44.98
TenStar Games Pack £219.78

Total Value: **£1035.27**
Less Pack Saving: **£736.27**
SILICA PRICE: **£299.00**

£299

Inc VAT - Ref: STC 1272

PLUS! 16 NIGHTS HOLIDAY HOTEL ACCOMMODATION

The Falcon Has Landed!

- 16MHz 32-bit 68030 Processor
- 32MHz Motorola DSP and BLITTER co-processors
- DSP capabilities for voice recognition, speech synthesis and numerous audio special effects
- True colour display: 768 x 480
- 65,000+ colours on screen at once
- Record 8 channel, 16-Bit stereo sound and play back 4 channel, 16-bit stereo simultaneously
- SCSI II, DMA, MIDI IN & MIDI OUT, Stereo audio & microphone ports
- 1.44Mb Floppy Disk
- 1, 4 or 14Mb RAM
- Optional 65Mb Hard Disk
- Built-in ADC & DAC converters

HARDWARE:

ATARI FALCON 030
16MHz 32-Bit 68030 CPU, 1Mb RAM, 3 1/2", 1.44Mb FDD

SOFTWARE:

CALAPPT - Personal Information Manager - Enhanced version calendar allowing import/export & printing
PROCALC - Calculator
SYSTEM-AUDIO-MANAGER - An Auto Folder/Desk Accessory combination that allows the user to record sounds from a microphone and assign various system functions
TALKING CLOCK - Announces the time at preset intervals
AUDIO FUN MACHINE - A revolutionary audio program using DSP
LANOMINES & BREAKOUT - Two fully featured games

£499

2Mb RAM, 65Mb Hard Disk
Ref: STC 7046

ALL PRICES INCLUDE VAT - FREE OVERNIGHT COURIER DELIVERY IN THE UK MAINLAND

131082-0845

SILICA SYSTEMS OFFER YOU

- FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
- PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- ESTABLISHED 14 YEARS:** Proven track record in professional computer sales.
- £12 MILLION TURNOVER (with 60 staff):** Solid, reliable and profitable.
- BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available 081-308 0888.
- SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.
- THE FULL STOCK RANGE:** All of your requirements from one supplier.
- FREE CATALOGUES:** Will be mailed to you with offers + software and peripheral details.
- PAYMENT:** Major credit cards, cash, cheque or monthly terms.

Before you decide when to buy your new computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the 'Silica Systems Service'.

MAIL ORDER HOTLINE
081-309 1111

SILICA SYSTEMS

MAIL ORDER: Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-309 1111 Fax No: 081-308 0888
LONDON SHOP: Opening Hours: Mon-Sat 9.30am-6.00pm No Late Night Opening	52 Tottenham Court Road, London, W1P 0BA	Tel: 071-580 4000 Fax No: 071-323 4737
LONDON SHOP: Opening Hours: Mon-Fri 9.30am-7.00pm (Sat close 6.30pm) Late Night: Thursday - 8pm	Selfridges (1st Floor), Oxford Street, London, W1A 1AB	Tel: 071-629 1234 Extension: 3914
SIDCUP SHOP: Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday - 7pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-302 8811 Fax No: 081-309 0017
ESSEX SHOP: Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm) No Late Night Opening	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA	Tel: 0702 462426 Fax No: 0702 462363

To: Silica Systems, STREV-1292-79, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE ST RANGE

Mr/Mrs/Miss/Ms: Initials: Surname:

Company Name (if applicable):

Address:

Postcode:

Tel (Home): Tel (Work):

Which computer(s), if any, do you own? 79E

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

SOLENT SOFTWARE

PUBLIC DOMAIN FOR THE ATARI ST

We stock a full range of Games, Demos and Utilities plus ALL the POV Demo Disks. All disks are double-sided, single-sided available to special order. For copy of our latest disk Catalogue (updated weekly) send a blank disk and SAE, or just end £1 for Catalogue on one of our disks with free PD.

PRICES - 1 to 9 disks : £2-00 each. 10 disks or more : £1-50 each.

A SMALL SELECTION FROM OUR EXTENSIVE RANGE

6 KIDGAMES - consists of Kidgraph, Kidgrid, Kidmixup, Kidsketch, etc.
 EDUCATIONAL GAMES with 7 Kids, Magic Storybook and Magic Speller.
 ELVIN CRYSTALS 1 and 2 - two excellent adventures written with STAC.
 Revenge of the Mutant Camels - latest shoot'em up from Jeff Minter + 3 others.
 Klatrix, 8 Ball, Entombed, Rockfall and Mystic Well - brilliant collection.
 Michaels Big Adventure - childrens adventure written with the Tails system.
 The Manager - latest football management game - win the League and FA Cup!
 STRIKER/SWIFTER - two excellent 'Flying Shark' type vretical scrolling games.
 VIOLENCE - the best 'Xenon' type shoot'em up in the Public Domain + 2 others.
 SO WATT - 17 excellent demo screens from the Carebears. Still one of the best.
 FISH 'N' CHIPS - multi-screen demo from Sewer Soft with 12 'fishy' surprises.
 LIVES A BITCH - good demo from the Lost Boys with infamous vomit sample.
 KINKY BOOTS - excellent sampled sound from the Persistence of Vision.
 ULTIMATE GFA DEMO by the Overlanders, 12 brilliant demos written in GFA basic!
 DARKSIDE OF THE SPOON - full screen mega-demos from ULM and guest screens.
 VODKA DEMO - ten unbelievable screens from Equinox. One of the best to beat.
 WHAT NOT TO DO - 8 short comical animations from the Inner Circle. Very funny.
 DEMO.131/134 PHALEON GIGA DEMO - massive 34 sub-demos, 4 menu screens, etc (4 DISKS).
 28 Desktop Accessories complete with Accessory Loader, Ramdisks, etc.
 6 Databases plus 2 Label Printers, good selection for your home business.
 STICKER III - create and print excellent disk labels with text and graphics.
 OPUS V2.2 - excellent GEM based spreadsheet and charting program. 1 MEG needed.
 GEMINI - replacement desktop from Germany, similar to Neodesk. 1 MEG needed.
 COPIERS - 28 disk copy programs including X.COPY, PRO.COPY, STAR COPY, ST.COPY.
 ST.WRITTER V4.2 with W.P.Utilities plus 2 Type Tutors and 2 Spell Checkers.
 1ST WORD. Still the best Word Processor with Printer Drivers and Word Counters.
 DESKJET Printer Drivers for the HP DESKjet and Cannon Bubblejet plus utilities.
 COLOURBURST and FINE LINE art programs with Snoopy and Garfield Slideshowes.
 6 excellent Art Programs including Van Gogh, Art.ST, ST.Graph and ST.Cad.
 IN BED WITH MADONNA - over 100 digitised pictures from the film (3 DISKS).
 STOS Basic Source Code for five complete games - Stos Basic required.
 Adventure Game Toolkit (AGT) write your own 'Infocom' style adventure games!
 AGT Source Code for eight complete adventure games. (LANG.17 required).
 ACCOMPANIST V2.4 midi sequencer by Henry Cosh, includes loads of samples.
 EMPIRE NOISETRACKER the full version with modules, samples, source code, etc.
 ALCHEMIE JUNIOR SEQUENCER the latest midi sequencer available. 1 MEG.
 CITADEL, VULCAN EMBASSY and ENTERPRISE - three excellent BBS programs.
 KERMIT V1.02 and VANTERM V3.8 - two of the best communications software.
 FILM FILE ENQUIRY - database of over 2000 films with actors, director, etc.
 INTRO CONCEPT DEMO CREATOR - create your own demos with a few mouse clicks!

SOLENT SOFTWARE

53 RUFUS GARDENS, TOTTON, HANTS, SO4 3TA TEL: 0703/868882

ATARI REPAIRS & SPARES

- ★ FREE ESTIMATES ★
- ★ NO STANDARD CHARGES ★
- ★ 48 HOUR TURNAROUND ★
- ★ 3 MONTH WARRANTY ★
- ★ COLLECTION/DELIVERY ARRANGED ★
- ★ FREE TECHNICAL HELPLINE ★



Repair price examples: Board Repairs from £13.50;
 Disc Drive

Replaced £59.95; Replacement Keyboard £69.95.

We will collect from your door today! (If advised before 2pm & in UK mainland) Free Fitting on all Upgrades.

XTRA-RAM DELUXE 1/2 MEG£59.95 XTRA-RAM DELUXE 2 MEG£99.95

XTRA-RAM STE 1/2 MEG£24.95 XTRA-RAM STE 2 MEG£69.95

ALL ABOVE UPGRADES INCLUDE FITTING.

INTERNAL POWER SUPPLY£49.95 JOYSTICK EXTENSION CABLES...£3.99

ALL OTHER SPARES AND ACCESSORIES

All Spares Prices include next day delivery
 Visa Order Hotline Open from 9am-9pm 7 days a week.

HAWKWELL ELECTRONIC SERVICES

2 WYMAN'S COTTAGES, MOUNT BOVERS LANE, HAWKWELL,
 HOCKLEY, ESSEX. SS5 4JB.

ORDERS & ENQUIRES TEL. SOUTHEND-ON-SEA 0702 207593 (9am-9pm)

TECHNICAL HELPLINE TEL. SOUTHEND-ON-SEA 0702 207274 (9am-6pm Mon-Fri)

CALLERS WELCOME (Mon-Fri 9am-6pm & Sat 10am-2pm)

TRADE ENQUIRES WELCOME, CALL FOR OUR FREE DEALER PACK

COLOUR KITS for MONO PRINTERS

Ever wished you'd bought a colour printer instead of a mono one? Wouldn't it be nice to print out pictures in colour? Now you can with Atari "FlexiColour Kit". Each Atari FlexiColour kit comes complete with everything you need to print in colour, including superb software. The colour kit is simple to fit and use, will not affect your guarantee and prints AS GOOD AS A COLOUR PRINTER. If your printer is not listed below please phone. Atari FlexiColour kits for Star LC10, LC20, all Star 24 Pin. Panasonic 1080/81, 1124. Epson FX80, FX100, LQ800 etc. Citizen 120D, 120D+, NEC P6, P6+, Seikosha SP800, 1900, 2000. Please note colour kits come complete with coloured ribbons. COMPLETE KIT £39.95

FLEXIDUMP PLUS SUPERB COLOUR DUMPS FROM YOUR COLOUR PRINTER

- ★ Superb Colour/Mono Graphics Dumps.
- ★ Vary Dump size from 1mm to 10 metres in length.
- ★ Select part of screen to be printed.
- ★ Choose from a variety of densities and passes.
- ★ Colour correction for best possible colour.
- ★ Colour catalogue function. Put a picture disk in and Flexidump will print a miniature of each picture and print the titles.
- ★ Also includes a complete production label program.
- ★ Other features include Text insertion, X Reflect, Y Reflect, Mirror, Upturn, Fill, Rbox, Random, Invert, Frame, Block, Circle, Sketch, Upright or sideways Dump, Auto Calculates on 1:1 Aspect Ratio or Deselect this and Stretch the Dump.
- ★ Ideal for use with T-Shirt printing ribbons. FlexiDump Plus (2 Disks) Colour and Mono.

9 and 24 pin drivers included only £39.95

INKJET/BUBBLEJET REFILL KITS

Care Deskjet 500 and Canon Bubblejet 6 black refills
 for only £19.95.

Please state which type when ordering.

How to order: Enclose cheques/PO made payable to:

CARE ELECTRONICS or use Access/Visa.



CARE ELECTRONICS



Dept STR, 15 Holland Gardens, Garston, Watford, Herts, WD2 6JN.

Tel: 0923 894064 Fax: 0923 672102

RECYCLE IT

Don't throw away your plastic printer ribbon cases when the ribbon wears out. Just take the top off, take out the old ribbon and reload it with a new one. It's simple. Full instructions supplied.

Reloads for:-

Star LC200 9 Pin 4 Colour (Normal Ink)1 Reload - £5.995 Reloads - £23.95
 Star 24 Pin 4 Colour (Normal Ink)1 Reload - £6.995 Reloads - £29.95
 Citizen Swift 4 Colour (Normal Ink)1 Reload - £6.995 Reloads - £29.95
 Ink ribbons available in Gold, Silver, Magenta, Orange, Purple, Brown, Green,
 Blue, Red for a wide range of printers.

Special reink for Panasonic printers and Star LC200 9-pin black 59ml bottle£9.95

T-SHIRT PRINTING RIBBONS

PRINT ON NORMAL PAPER IRON ON T-SHIRT

4 Colour Citizen Swift£29.95
 4 Colour Citizen Swift (Reload)£14.95
 4 Colour Star LC10£14.95
 4 Colour Star LC200 9 Pin£19.95
 4 Colour Star LC200 9 Pin (Reload)£12.95
 4 Colour Star LC200 24 Pin£29.95
 4 Colour Star 24 Pin (Reload)£14.95
 1 Colour Citizen 120D/Swift£9.95
 1 Colour Star LC10£9.95
 1 Colour all Star 24 Pin£11.95
 1 Colour Epson FX80/LQ400/MX80£9.95
 1 Colour Epson LX80£9.95
 1 Colour Epson FX100£11.95
 1 Colour Panasonic KXP 1080£11.95
 1 Colour Taxan/Canon 1080A£11.95
 Heat transfer Pens 5 large red/orange/yellow/green/blue,
 Large pens have a marker size nib£14.95 a set
 Heat transfer Pens 5 small red/orange/yellow/green/blue,
 Small pens have a fine nib£11.95 a set

T-SHIRT RIBBONS NOW AVAILABLE IN RED, BLUE, GREEN, BROWN, YELLOW
 and BLACK AND FOR A WIDE RANGE OF PRINTERS

Phone our order line on 0923 894064 (Answerphone outside normal hours)

Atari ROM Cartridge takes two 27256 or 27512 EPROMS£11.28

50 Colour Pictures£9.95

ALL PRICES INCLUDE VAT AND CARRIAGE

SHADOWWORLDS



Just how hazardous can deep space be? Alan 'Spock' Dykes seeks the shadowy truth in a far-off world...

Nice graphic touches
Plenty of exploration
Quick access functions

PROS AND CONS

Slow starter
Lacks clarity to begin with
Not very colourful

"Confusing at times but still rewarding"

NAME: SHADOWWORLDS
COMPANY: KRISALIS
CONTACT: 0709 3722901

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1 MB

GRAPHICS ★★★★★
SOUND ★★★★★
VALUE FOR MONEY ★★★★★
PLAYABILITY ★★★★★

OVERALL **80%**

Space-based RPGs always used to break down into two categories, the interactive 'movie' style or the behind the cockpit 'simulation' style. Then along came **Space Crusade** with its rigid board game rules and easily understood layout. Bringing the multiple character combat simulation into the '90s, the game's relative simplicity made it a success. **Shadow Worlds** attempts to take this theme a step further by adding some of the ingredients of a 'movie' game while sticking with the idea of multiple characters, multi-tasking and quick, easy to access control functions.

WAR AND PEACE

Set in another galaxy where one of those ubiquitous space 'federations' has finally found peace and tranquillity, you play the part of the leader of a team of commandos sent on a high-security mission to a weapons research planet on the edge of explored space. Something has gone wrong there, but since you're not supposed to be producing weapons in this time of peace you can't just send in a few cavalry divisions to sort the mess out.

First you choose four characters or accept the computer's default team. Your team must have the best possible combination of strengths in the following areas: strength, combat ability, health and technical knowledge, in order to succeed in their mission. Then you're transported to the top-secret planet where, with the aid of your trusty mouse, you guide the foursome through their fearsome task.

To begin with all your troops are equipped with



armoured space suits. On the inventory screen (accessed by pressing the right mouse button) you will see

that each of your characters has a separate box which shows what items they are carrying, up to 16 at a time, and also their life support system, measured by coloured bars. During the game you will not only need to collect weapons and tools but also oxygen (or in some cases helium) tanks and liquid food packs to keep them alive. Sleep is also needed and provided by clicking on the 'eye' icon on the inventory screen.

LIGHT AND DARK

Shadow Worlds is aptly named because a lot of it is hidden in darkness. Light switches may be found in most rooms but are often guarded by enemy creatures and robots. Because of this, the first item you must find is a battery. Each soldier has a torch built into his headgear but each needs a battery to operate it. Which, oddly enough, they don't start out with.

The multitasking system takes a little time to understand, but it is quite usable. It allows you to operate your commandos separately, as a single unit of four or as two units of two troops each. They can examine/read, use held objects, operate controls or pick up items, walk individually or as a group in up to five different formations. These tasks are carried out by clicking on a central control character on the main screen.

Watch out for wall-mounted VDUs. They usually contain valuable information.

	STRENGTH 27 HEALTH 54 COMBAT 03 TECH 06	NAME: STEVENS HISTORY: GENE LAB WARD, CLIMED ATTEN. WARD, HIGH LEADERSHIP, PROBLEM LOW TENDENCY, HELLO	AGE: 31
	STRENGTH 26 HEALTH 50 COMBAT 02 TECH 01	NAME: KRY HISTORY: SYMBIOTIC, LIFELINE FACILITY, GUNNER EXPERIENCE, WARD TACTICS, WARD, NO FEAR	AGE: 35
	STRENGTH 26 HEALTH 51 COMBAT 03 TECH 03	NAME: BFINN HISTORY: GENOLOGY, WARD IN GUN, WARD, WARD OPERATES, PARE, PARE LINES	AGE: 32
	STRENGTH 32 HEALTH 50 COMBAT 03 TECH 05	NAME: SI-7 HISTORY: GENOLOGY, WARD GUN, WARD, WARD GUN, WARD, WARD GUN, WARD, WARD	AGE: 32

Tailor your troop selection carefully.

	STRENGTH 27 HEALTH 54 COMBAT 03 TECH 06	NAME: STEVENS HISTORY: GENE LAB WARD, CLIMED ATTEN. WARD, HIGH LEADERSHIP, PROBLEM LOW TENDENCY, HELLO	AGE: 31
	STRENGTH 26 HEALTH 50 COMBAT 02 TECH 01	NAME: KRY HISTORY: SYMBIOTIC, LIFELINE FACILITY, GUNNER EXPERIENCE, WARD TACTICS, WARD, NO FEAR	AGE: 35
	STRENGTH 26 HEALTH 51 COMBAT 03 TECH 03	NAME: BFINN HISTORY: GENOLOGY, WARD IN GUN, WARD, WARD OPERATES, PARE, PARE LINES	AGE: 32
	STRENGTH 32 HEALTH 50 COMBAT 03 TECH 05	NAME: SI-7 HISTORY: GENOLOGY, WARD GUN, WARD, WARD GUN, WARD, WARD GUN, WARD, WARD	AGE: 32

Keep an eye on your troops' health here.

I didn't immediately warm to **Shadow Worlds**, but it did grow on me after a while. Once all the moves and controls are fully understood and you learn to analyse the inventory screen and operate all the devices at your disposal it turns into quite an absorbing game.

The 3D movie-style graphics are reasonably good and there are some nice touches, even though the backgrounds are a little dull, while the sound effects are sparse but good enough.

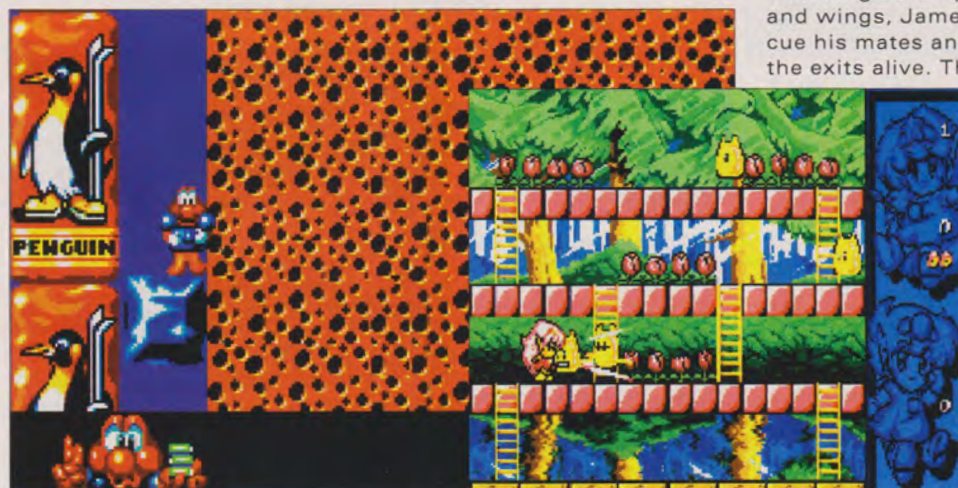
In the final analysis **Shadow Worlds** is neither **Space Crusade** nor **Future Wars**, but if I had a hankering for more close combat space station exploration I would get this game, if only because there aren't that many alternatives.

RAVING MAD

It's the silly season again! As yet another Christmas compilation hits the streets, Steve Keen dons his Santa outfit and beard to take a look. . .



Make the most of these peaceful scenes, as it won't be long before the cute monsters are replaced with huge guardians.



What the cod lacks in legs he easily makes up for with his extendible neck. Use it to grip onto the ceilings.

Nothing causes quite so much scepticism as the release of a compilation. It doesn't matter how hard you try to tell yourself that what you have in front of you is a great, value-for-money, box of delights, you still can't help asking yourself, "what's the catch?" There's no denying that these are big name games: **Rodland**, **Mega Twins** and **James Pond 2 - Robocod** have all been up there in the top-selling games charts, but none of them held their positions for much longer than a month.

LICENCE TO THRILL?

Millenium's sequel to **James Pond** takes the original idea of the secret agent fish and

splices it with a new witticism, **Robocod**. The result is a half-man, half-fish, half-robot (if such a calculation is possible) scenario which throws up all kinds of possibilities for game-play. The Cod's latest mission is to infiltrate a toy factory that's been taken over by the machiavellian Doctor Maybe. The dastardly doc has sabotaged the toys destined to be delivered around the world for Christmas and intends to hold the world to ransom.

NEW POWERS

You don't need to know any more than this, suffice to say that ultra-cute sprites and backdrops are the order of the day. The game is split into nine rescue missions and using his new-found powers of stretchability, enabling him to reach the impossible, and the plethora of strap-ons including bullet-proof armour and wings, James must rescue his mates and make it to the exits alive. This is simple

Rodland's screens can get very cluttered at times, but the movement of the sprites never slows down!

level after level of mean monsters and colourful scenarios. Once again there's not much on offer in the game-play stakes, but the graphics are very pleasing to the eye and you'll have to go a long way to find any sprites cuter or better animated than these.

By now you will have realised that a pattern has emerged - these games are sickeningly cute! **Mega Twins** is no exception, but there's much more to this than the other two as the game-play takes the more traditional form of a quest. You can choose to be either of the two Mega brothers and start out in a variety of locations. The visuals aren't any better than in the other games, but you can move more freely around the platforms and change your surroundings more radically. The creatures you have to fend off all have their own characteristics and some of the end-of-level guardians are pretty weird, but unlike the other two they're more than just a bunch of pretty pixels and you're never quite sure what's around the corner.

There's nothing really to separate these games from each other. No-one above the age of 12 will find much long-term appeal in their innards, but there's no denying that all three look great and should prove popular with younger gamers.

"All looks and no hooks. Only for the very young"

NAME: RAVING MAD

COMPANY: US GOLD

CONTACT: 021 356 3388

PRICE: £25.99

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5 MB

GRAPHICS ○○○○○○

SOUND ○○○○○○

VALUE FOR MONEY ○○○○○○

PLAYABILITY ○○○○○○

OVERALL **69%**

Beautifully drawn and coloured sprites
Appealing to under 12's

PROS AND CONS

No real variety for a compilation

CITIZEN

PRINTERS

WITH
2 YEAR
WARRANTY

NEW MODELS

AND
LOWER
PRICES

FREE! STARTER KIT

ALL YOU NEED TO GET STARTED
WITH YOUR NEW CITIZEN PRINTER

- 2 Metre Parallel Printer Cable
- 3 1/2" Disk - Driver for Windows 3
- 3 1/2" Disk - Amiga & ST Drivers
- 200 Sheets of Continuous Paper
- 100 Continuous Address Labels
- 5 Continuous Envelopes

WORTH £29.38

WITH EVERY
CITIZEN DOT MATRIX
PRINTER FROM SILICA
or £19.38 (£10 off RRP) to purchase.



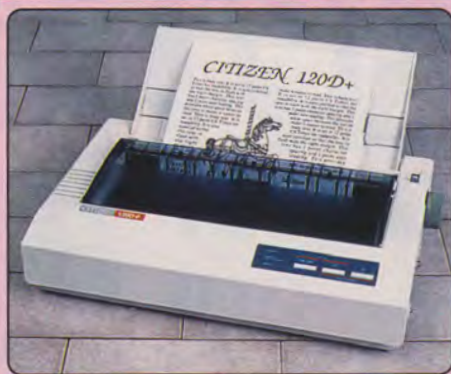
**PLUS! FREE
AMIGA PRINT MANAGER**

For faster printing from your Amiga, with clearer
images and more vibrant colours. Available free
of charge (on request) when you buy a Swift 9,
200 or 240 printer

Features include:
• Improved Image Smoothing
• Gamma/Colour Correction
• Image Scaling
• Colour Separation
• Reduces/eliminates Banding
(inc VAT - see text)
or for £13.10 (£1 off RRP) to purchase (ASC 4572)

**WORTH
£14.10**

BUDGET 9 PIN PRINTER



144 CPS 80 COLUMN

- Citizen 120D+ - 9 pin
- 144cps Draft, 30cps NLQ
- 4K Printer Buffer + 2 Fonts
- Parallel or Serial Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- Pull tractor & bottom feed
- FREE Silica Printer Starter Kit

£115

+VAT= £135.13 ref: PRI 2120

RRP £199

SILICA STARTER KIT £25

TOTAL VALUE: £224

SAVING: £109

SILICA PRICE: £115

The Citizen 120D printer comes supplied with a parallel
interface as standard. If you require a serial interface instead,
please state ref: PRI 2125 when placing your order with Silica.

STAND OFFER



**CITIZEN PRINTER
STAND**

For Swift 9, 24, 240, 200 and
224 Printers

- Helps keep pace with Citizen Printer's
powerful paper handling
- Robust & Durable Construction
- Saves space and protects continuous
stationery from dust and damage
- Compatible with bottom and rear feed
operation

£19

+VAT= £22.33 ref: PRA 1242

9 PIN PRINTERS



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Swift 9 - 9 pin - 80 column
- 192cps Draft, 48cps NLQ
- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- FREE Colour Kit
- FREE Silica Printer Starter Kit

£159

+VAT= £186.83 ref: PRI 2209



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Swift 9x - 9 pin - 136 column
- 192cps Draft, 48cps NLQ
- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

£199

+VAT= £233.83 ref: PRI 2309

24 PIN PRINTER



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Swift 240/240C - 24 pin - 80 column
- 300cps SD (15cpi), 240 cps Draft, 80cps LQ
- 8K Printer Buffer - 40K maximum
- 9 LQ Fonts + 2 Scalable Fonts (8-40pts)
- 1 x Font Cartridge Slot - for plug in 'Style' Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360 dpi
- Epson, IBM, NEC P20 & CEL Emulations
- Quarter Printing Facility
- Auto Set Facility - Bi-directional I/F
- Auto Emulation Detection
- Command View IV Front Control Panel
- Ultra Quiet Mode - 44.5 dB(A)
- Colour Printing Standard - Swift 240C
- Colour Printing Optional - Swift 240
- FREE Silica Printer Starter Kit

£239

+VAT= £280.83 ref: PRI 2560

**NEW! SWIFT 2
SERIES**

SWIFT 240M

MONO PRINTER
(COLOUR OPTION AVAILABLE)

SWIFT 240C

COLOUR PRINTER

RRP £329

STARTER KIT £25

TOTAL VALUE: £354

SAVING: £115

SILICA PRICE: £239

+VAT= £280.83 ref: PRI 2560

SWIFT 240C COLOUR

RRP £369

STARTER KIT £25

TOTAL VALUE: £394

SAVING: £135

SILICA PRICE: £259

+VAT= £304.33 ref: PRI 2571

24 PIN PRINTERS



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Swift 200 - 24 pin - 80 column
- 270cps SD (15cpi), 216 cps Draft, 72cps LQ
- 8K Printer Buffer - 40K maximum
- Parallel Interface
- 6 LQ Fonts
- Graphics Resolution: 360 x 360 dpi
- Epson, IBM, & NEC P20 Emulations
- Quarter Printing and Auto Set Facility
- Ultra Quiet Mode - 44.5 dB(A)
- Colour Option Available
- FREE Silica Printer Starter Kit

£179

+VAT= £210.33 ref: PRI 2490



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Swift 24x - 24 pin - 136 column
- 192cps Draft, 64cps NLQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM and NEC P6 Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

£299

+VAT= £351.33 ref: PRI 2574

INKJET PRINTER



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen Project - inkjet - 80 column
- 360cps Draft, 120cps NLQ
- 50 Nozzle Head - Whisper Quiet 47dB(A)
- 8K Printer Buffer + 3 Fonts
- Optional HP Compatible Font cards
- Parallel Interface
- Graphics Resolution: 300x300dpi
- HP Deskjet plus emulation

£345

+VAT= £405.38 ref: PRI 2090

NOTEBOOK PRINTER



**FREE! ON REQUEST
CITIZEN AMIGA
PRINT MANAGER**

For Swift 9, 24, 240, 200 and
224 Printers

- Citizen PN48 Notebook Printer
- Non-impact Printing on Plain Paper
- 53cps LQ - 4K Buffer + 2 Fonts
- Rear and Bottom Paper Loading
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM, NEC P6 & Citizen Emulation
- Powered From Mains, Battery or Car Adaptor

£199

+VAT= £223.83 ref: PRI 2100

ACCESSORIES

SHEET FEEDERS	ORIGINAL RIBBONS
PRA 1200 1200 - £71.38	RIB 3530 1200/240 Swift 9 Black £2.81
PRA 1215 1240/224/240 Swift 924 - £98.70	RIB 3540 1240/240 Swift 24 Black £7.15
PRA 1228 1240/224/240 Swift 924 - £42.00	RIB 3555 1240/240 Swift 924 Colour £76.63
	RIB 3248 PN48 Single Stroke £3.61
	RIB 3348 PN48 Multi Stroke £3.61
SERIAL INTERFACES	COLOUR KITS
PRA 1108 1200 - £26.45	PRA 1228 1240/240/240/240 £25.25
PRA 1208 Swift 9/9x/1240/224 - £25.25	PRA 1240 Swift 9x/24x - £25.25
PRA 1709 Swift 24/240/240 - £29.38	PRA 1753 1240/224/240 Swift 24 - £13.10
32K MEMORY EXP	PN48 ACCESSORIES
PRA 1753 1240/224/240 Swift 24 - £13.10	PRA 1148 PN48 Battery £46.70
	PRA 1155 PN48 Cable Ext £29.37
	PRA 1162 PN48 Car Adaptor £16.80

Accessories prices inc. VAT & delivery

CITIZEN PRINTERS

FREE DELIVERY
Next Day - Anywhere in the UK mainland

FREE STARTER KIT
Worth £29.38 - With Citizen dot matrix printers from Silica

2 YEAR WARRANTY
(including the dot matrix printer head)

WINDOWS 3.0
Free Windows 3.0 driver with Starter Kit

FREE COLOUR KIT
With every Swift 9

FREE HELPLINE
Technical support helpline open during office hours

FROM SILICA

061192-1245

SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 14 YEARS:** Proven track record in professional computer sales.
- **£12 MILLION TURNOVER (with 60 staff):** Solid, reliable and profitable.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available 061-308 0888.
- **SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.
- **THE FULL STOCK RANGE:** All of your requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers + software and peripheral details.
- **PAYMENT:** Major credit cards, cash, cheque or monthly terms.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and accessories, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the 'Silica Systems Service'.

MAIL ORDER HOTLINE
081-309 1111

**SILICA
SYSTEMS**

MAIL ORDER: Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-309 1111 Fax No: 061-308 0608
LONDON SHOP: Opening Hours: Mon-Sat 9.30am-6.00pm No Late Night Opening	52 Tottenham Court Road, London, W1P 0BA	Tel: 071-580 4000 Fax No: 071-323 4737
LONDON SHOP: Opening Hours: Mon-Fri 9.30am-7.00pm (Sat close 6.30pm) Late Night: Thursday - 8pm	Selfridges (1st Floor), Oxford Street, London, W1A 1AB	Tel: 071-629 1234 Extension: 3914
SIDCUP SHOP: Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday - 7pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-302 8811 Fax No: 061-308 0017
ESSEX SHOP: Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm) No Late Night Opening	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA	Tel: 0702 462426 Fax No: 0702 462363

To: Silica Systems, STREV-0193-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE CITIZEN RANGE

Mr/Mrs/Miss/Ms: Initials: Surname:

Company Name (if applicable):

Address:

.....

Postcode:

Tel (Home): Tel (Work):

Which computer(s), if any, do you own? 55L

VFM

FLIMBO'S QUEST

KIXX • £.99 • 021 625 3366

IN BRIEF: A Dewdropland beauty queen has been abducted by an evil professor so that he can harness her youth and beauty for his own dark purposes. However, her boyfriend just happens to be a mini super-hero (surprise, surprise!) and sets out to rescue her against all the odds.

And so begins yet another horizontally scrolling platform game. At the start you are armed with small knives and only a few lives but as time goes on and you collect coins (dropped by vanquished foes) you will be able to purchase better weapons, invulnerability and other items to make life easier.

ST REVIEW COMMENT: "Flimbo's Quest is a neat, cutesy platform shoot-'em-up that will keep you very busy – even obsessed – for quite a while. My advice is to play this game with a very good joystick or your fun will be ruined by clumsy play – which is all too easy with a bad stick.

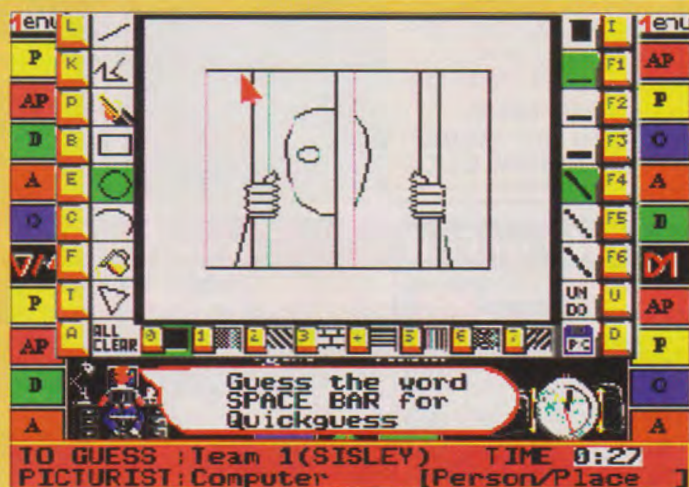
It's also useful to view *Flimbo's Quest* on a decent monitor if possible as the graphics are detailed and colourful, causing difficulty in sprite recognition, especially if both you and your enemy are on the move.

★★★★★

**ATARI ST
BUDGET BUY**



Whether you're looking for a last-minute stocking filler or a game to spend your Christmas cash on, this selection of cut-price goodies should contain something for you



PICTIONARY

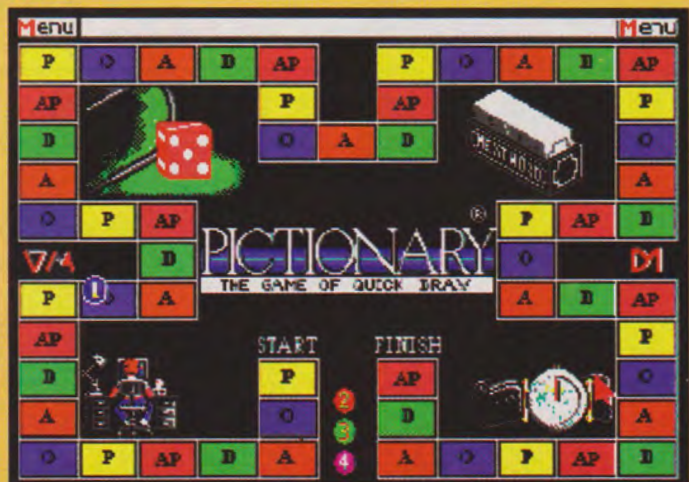
HIT SQUAD • £7.99 • 061 832 6633

IN BRIEF: If you've seen the popular board game, *Pictionary*, you will realise what an utter waste of money it is. It's not that there's anything inherently wrong with the game – in fact it's very entertaining. However, all it consists of is a set of cards, a board, an egg timer, a couple of pencils and some paper – yet the whole thing costs around £25. With a bit of imagination you could make it yourself for well under a fiver! Basically, the game involves picking 'word' cards from the aforementioned box based on the following categories: Person/Place/Animal, Object, Action, Difficult Words, and All Play (which can be any sort of word). Then draw a picture of your word, gesticulate wildly and hope your team-mate can guess it before your opponents do.

The good news is that the computer version is actually worth the money. You couldn't make this particular game yourself for under a fiver. Play is exactly the same as the board game, except now you can draw pictures on your ST with a rather nifty little art package and there's the positive advantage of not having to tidy up the cards and look for dice under the sofa when you're finished.

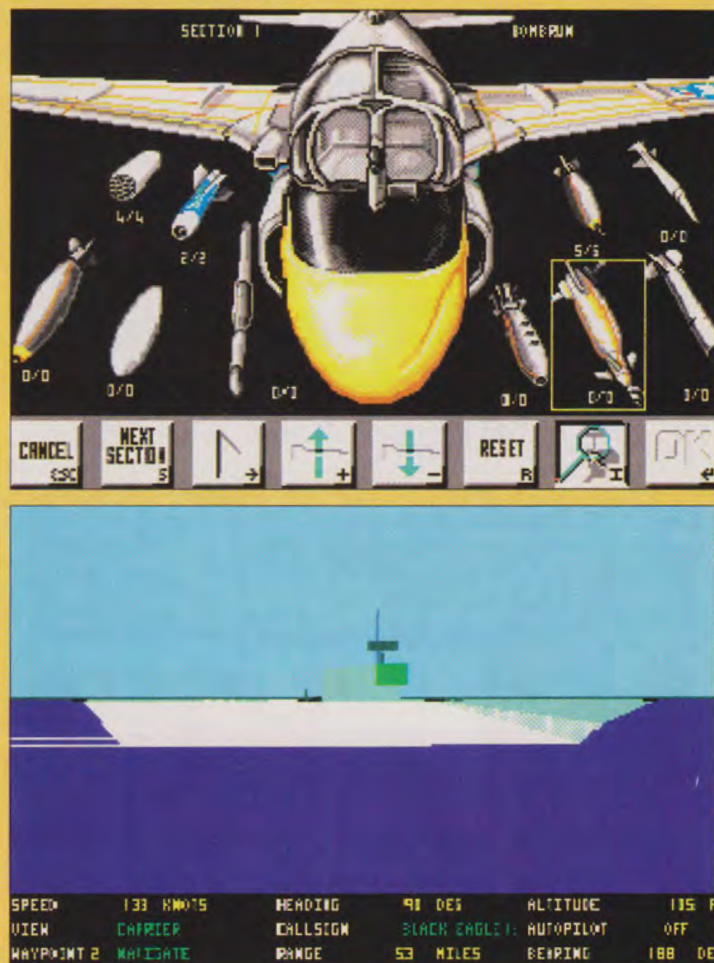
ST REVIEW COMMENT: "If guessing games are your thing, this represents much better value for money than the original board game."

★★★★★



FLIGHT OF THE INTRUDER

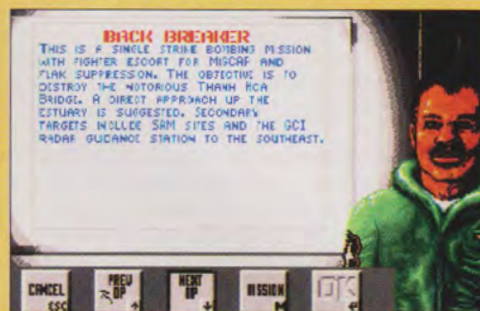
ATARI ST
BUDGET BUY



ACTION 16 • £14.99 • 0276 684 959

IN BRIEF: *Flight Of The Intruder* is a naval military flight simulation based around carrier operations in the Pacific and the Indian Oceans during the Vietnam war. You get to fly either of the two most important naval aircraft of the war, the Grumman A6 Intruder or the McDonnell Douglas F4 Phantom from the deck of a carrier in a number of air-to-air and air-to-sea engagements.

The main jobs include protecting US naval craft off the coast of Vietnam, aerial intercept missions and ground suppression missions. The aircraft are fitted with advanced radar and guidance systems and have a withering array of weapons options at their disposal.



ST REVIEW COMMENT: "Yet another in the current spate of mid-price games, *Flight Of The Intruder* is more than worthy of inclusion when military flight sims are discussed. It has realistic flight simulation, worthy graphics and very good overall sound. In fact the only real problem with it is that it's a bit too complicated.

The instruction manual is virtually a novel, containing 216 pages of essential information. Trying to remember all the controls will make you dizzyier than actually flying the plane. However, there are more than enough missions to keep you happy, so if you ever manage to master the controls you'll be glad you added an Intruder to your flight sim collection.

★★★★★

SPELLBOUND DIZZY

CODE MASTERS • £7.99 • 0926 814 132

IN BRIEF: Dizzy has gone stark raving mad. His friend, Theo the Wizard, left a spell book lying around and our foolish hero read out the most powerful spell in the tome, cast the magic and imprisoned all of the Yolkfolk (Dizzy's compatriots) in the underworld. Now he must release them by wandering around a strange land, picking up stars and mystery objects in order to free them. Along the way he meets whales, jellyfish, trolls, leprechauns and a multitude of other animated flora and fauna. Some are helpful, some are not.



ST REVIEW COMMENT: "This is yet another eccentric game of find the right object and use it with Code Masters' hip hopping egg on legs. Although the formula remains the same the game is absorbing. It was originally billed as "the biggest Dizzy adventure yet" and will take some time to complete. If you're new to Dizzy, don't be put off by the rather childish storyline.

★★★★★

THE DUEL – TEST DRIVE II

HIT SQUAD • £7.99 • 061 832 6633

IN BRIEF: I always thought that test drives took place on special circuits, as far away from the public as possible. It appears not. In order to test the latest offerings from Porsche and Ferrari you must hit the open road (literally sometimes) and compete against the opposition, to see which is the best of the cars that no-one really can afford. There are several levels of difficulty (in fact more than any other racing sim I've seen) the standard auto or manual gearshift options and a variety of highways to race on.



ST REVIEW COMMENT: "This is a good-looking game, with smooth scrolling graphics and plenty of scenery – even in your rear view mirror! The car is easy to control and centering your steering is greatly assisted by a little blue dot on the wheel. The biggest disappointment is that the car never gives the impression of speed until you are just about to hit an obstacle. Then it's too late. *The Duel* looks good and plays well but lacks atmosphere. Pity.

★★★★★

BATTLEHAWKS 1942

KIXX • £14.99 • 021 625 3366

IN BRIEF: Nostalgia buffs will delight in this WW2 combat sim set in the Pacific theatre of operations. You can take part in The Battle Of Midway, the Battle Of The Coral Sea, The Battle Of The Santa Cruz Islands and The Battle Of The Eastern Solomons, as either an American or Japanese naval air combatant. The planes on offer are world famous - Zero, Val, Kate, Dauntless, Wildcat and Avenger. The missions are either fighter intercept, torpedo bomber, or dive bomber and the going can be easy, tough or very tough!

ST REVIEW COMMENT: "I've always wanted to sit in a dive bomber and literally fall out of the sky at a designated target, pulling out of the dive just before it seems as though I'm about to hit the water. *Battlehawks* has made my dream come true. The dive bombing and torpedo run missions make a welcome break from the guided missile and radar systems of modern aircraft flight simulations, as does the sound of propeller engines humming from your ST. The game is very user friendly, allowing you to get straight into the thick of the action on a training mission without too much reference to the manual. Getting it right will involve some guidance, of course, and the tactics and explanations provided are fascinating as well as informative. The instruction manual doubles as a history book with lots of real life facts, figures and people, making the game much more interesting. Lucasfilm has a reputation for producing top-quality games and it looks as though they've done it again.

★★★★★



FUTURE WARS

KIXX • £14.99 • 021 625 3366

IN BRIEF: *Future Wars* is an interactive role-playing graphic adventure using cinematic programming. Your character walks and talks at your command. Using a mouse you simply click on an object or area that you want the sprite to move to and it will move there.

A quick click on the right mouse button then reveals a command menu containing such role playing gems as 'EXAMINE', 'TAKE', 'INVENTORY' and 'SPEAK'. These allow you to interact fully with his surroundings.



To start with the storyline, as it is explained in the manual at any rate, seems to bear no relationship whatsoever to the game itself. The latter starts off on a window cleaning lift, of all things. But as the game progresses and aliens start to make their mark, everything eventually becomes clearer.

ST REVIEW COMMENT: "*Future Wars* sounds promising, but unfortunately it doesn't quite make it. The cinematic technique, with its pop-up menus and lovely sprites which match *Prince Of Persia* for quality, is very user friendly and works a treat but the game sadly lacks any immediate 'punch'. I was expecting an exciting start, but instead I just found myself muddled up in some very laborious examine, store and use adventure routines.

Admittedly it does get better as it goes along, and there is a certain amount of action to keep you going, but unless I was a hardened adventurer I'd probably feel a bit cheated by this game.

★★



We're going P.D. MAD are you coming too ?

With prices from 5p per program the MAD offers continue. (see below)

[Example: Mega Utilities (disk UTIL-34) 31 Utilities only £1.50]

Our disks contain 500k-700k per D/S disk & 250k-350k per S/S disk



WARPZONE PDL

53 Ropewalk, River St.
St. Jude's, Bristol BS2 9EG
Telephone/Fax: 0272 553758

FOUNDER MEMBER of THE CONFEDERATION of PUBLIC DOMAIN LIBRARIES

BUSINESS

BUS-02	ST Writer Elite (GoodWord Pro)	'S'
BUS-03	EZ Text + (Working DTP demo)	'S'
BUS-06	Opus (Professional Spreadsheet)	'D'
BUS-11	Deskjet Drivers (loadsdrivers)	'S'
BUS-12	Fastbase (Excellent First Database)	'D'
BUS-16	Calamus Fonts (28 extra fonts)	'D'
BUS-17	Printing Press (Cards, Disk labels - Posters, Banners Mailing labels & much more)	'D'
BUS-19	P.Press Support (Extra graphics)	'D'
BUS-21	Add.book/Card ST/D base + 5 others	'D'
BUS-26	Organiser/S' sheet/Word pro + 7 others	'D'
BUS-27	ALICE. Excellent Text Editor	'S'
BUS-28	Publishing Partner Fonts (8 + editor)	'D'
BUS-29	EZ-Label/Cardfile/Mailmerge + 8 more	'D'

GENERAL

GEN-02	ST-Tour. (Specially for beginners)	'S'
GEN-04	Your 2nd ST Manual (A MUST)	'S'
GEN-05	Adventure Writer/Skymap + 4 more	'D'
GEN-06	Archive Suite (back-up in less space)	'D'
GEN-09	ZX-81 Emulator + lots of programs	'S'
GEN-12	Formfinder 2.1 (find a winner?)	'S'
GEN-16	60 asst'd Samples (SPL format)	'D'
GEN-20	Firstbase DB + 7 more good progs	'D'
GEN-22	E-Plan (Electronic Circuit Designer)	'S'
GEN-24	Joke Database (Laugh with us!)	'D'
GEN-25	Quartet Samples II (730k of samples)	'D'
GEN-30	Film File Enquiry (Film Info Base)	'D'
GEN-31	TV Taster/Asst. Chef/Party + 1 other	'D'
GEN-33	Newgen (trace your family Tree)	'S'
GEN-34	SOZOBON 'C'	'D'

STE ONLY

STE-01	Jungle Demo + Medium Res. Fix	'D'
STE-05	Mental Hangover, Amiga Conv. 1 meg	'D'
STE-06	ST Presentations (5 demo's)	'D'
STE-07	Fantasia (not Tos 1.62/1 meg) + 3 more	'D'
STE-08	Being STE + Mini-Movie	'D'
STE-03	Slime Balls + An Cool Demo's	'D'
STE-04	Psycheddie House II	'D'
STE-09	T.R. Art Show... The art of Tobias Richter comes to the STE fabulous artwork with an original STERO sound track, a MUST (2 disk set £2.75)	'D'

DEMO'S

FEATURED DEMO DISK 'CHRISTMAS'

Get the Christmas spirit with this animated scene
GET THIS DISK FREE
When you buy any 5 demo disks

DEM-102	Doctor Who Demo	'D'
DEM-88	Light Speed Demo	'D'
DEM-90	Delirious Demo (2 DISK SET £2.75)	'D'
DEM-95	Wings of Death music demo	'D'
DEM-97	KLF Demo (House hit + dancers)	'D'
DEM-98	Star Wars Rap	'D'
DEM-99	A Christmas Animation (and music)	'D'
DEM-101	Spinning Dolls + Shiny Bubbles	'D'
DEM-84	Things Not to Do (EXCELLENT)	'D'
DEM-67	Fish & Chips (GET THIS ONE)	'D'
DEM-46	European Demo's (2 DISK SET £2.75)	'D'
DEM-44	Skid Row (2 DISK SET £2.75)	'D'
DEM-43	Punish Your Machine " " " £2.75	'D'
DEM-75	Dark Side of the Spoon	'D'
DEM-82	Wasted Years	'D'
DEM-70	Lifes a Bitch	'D'
DEM-54	Gateway to Hexland	'D'
DEM-48	Summoning the Spawn	'D'
DEM-80	Le Joli Petit Matin (bawdy cartoon)	'D'
DEM-87	Sonic Projects (superb Digi-Music)	'D'
DEM-100	The Run (animation from T. Richter)	'D'

CYBERSTUDIO SPECIAL FEATURE

DEM-04	Cyberdemo 1 This three disk set will	'D'
DEM-05	Cyberdemo 2 show what can be done	'D'
DEM-06	Cyberdemo 3 with CYBERSTUDIO	'D'
17 mini-movies in all (3 disk set only £4.00)		

ART & GRAPHICS

GRA-26	Crackart (brilliant pic/process prog)	'D'
GRA-24	Paintlux (full feature art prog)	'D'
GRA-20	Kozmic (psychedelic screens 1 meg)	'D'
GRA-17	Pad (excellent hi-res art prog)	'D'
GRA-11	A.I.M. Atari Image Processor	'D'
GRA-10	Colourburst (art prog + 5 others)	'D'
GRA-27	Mono-Pics (43 Hi-Res Pic's)	'D'

UTILITIES

UTIL-40	Minidraft 2 (+ST CAD + 1 more)	'D'
UTIL-34	Mega Utility (31 asst'd utilities)	'D'
UTIL-06	HD util/Ramdisk and 12 others	'D'
UTIL-20	Archive Suite (compression progs)	'S'
UTIL-21	Sticker III (best disk labeller)	'D'
UTIL-22	10 progs for printer owners	'S'
UTIL-05	7 suites of various label progs	'S'
UTIL-30	Address book/V kill/Packer + 12	'D'
UTIL-32	MINT (unix type system)	'D'
UTIL-33	Superboot 7.2 + 7 others	'D'
UTIL-04	Disk cataloger & Labeler + 1 more	'S'
UTIL-06	Formater/Ramdisk + 12 more	'S'
UTIL-10	Gemini, alternative, Desktop	'S'
UTIL-11	18 asst'd desk accessories	'S'
UTIL-16	17 asst'd desk accessories	'S'
UTIL-24	Disk Doubler/Dual Format + 12	'S'
UTIL-27	Sagrotan (Virus killer, very good)	'D'
UTIL-38	Vault (best HD back-up) + 5 more	'D'
UTIL-02	System 2 (replacement opsys)	'S'
UTIL-39	Various Archivers & Packers	'D'
UTIL-40	ST CAD II (excellent CAD prog)	'D'
UTIL-41	Spread Sheet/Sector edit + 4 more	'D'

WARPZONES CHRISTMAS BOX

A cross section of our library including: Games, Demo's, Noisetrackers & Modules, Word Pro, Spreadsheet, DTP, Midi, Utilities, Desk acc's and much more on 20, YES 20 double sided disks. only £24.99
PLUS an extra disk of your choice as an Xmas pressie from us!
* This offer closes 31st December 1992 *



MIXED BAG

MXB-20	Foopy3/Disktool + 10 others	'D'
MXB-14	Geography/Typewriter + 10 more	'S'
MXB-12	Grammar check/Loan calc + 10	'S'
MXB-10	Diskmech/ST Init + 11 others	'S'
MXB-21	Quark .30 Sci-Fi stories on disk	'D'
MXB-18	Professional Astrology	'S'
MXB-16	15 asst'd utils inc. Goodies/Fontrix	'D'
MXB-04	12 asst'd utils inc. Codefind/Arc	'S'

FREE

Library case with every 10 disks

GO FOR GOLD!!!

Warpzone Gold Club gives you free PD programs each Quarter, plus discounted hardware and software items plus free gifts and competitions
20% discount on D/S library disks and 10% discount on S/S library disks
At least 10% discount on commercial software (Selected titles as available)
"Bonus Offer"...Half Price subscription to BATH BBS (see below)
All this for only...£10.00 per annum or £15.00 per annum inc. Bath BBS
Phone or Fax for info... [don't miss this golden offer for a wealth of software!]



BATH BULLETIN BOARD

The Leading 'ST' BBS. IN THE U.K.

is proud to be associated with WARPZONE PDL.

1000s of 'ST' files to download,
NO limits to subscribers

Call: 0225 840060 To check out the U.K.s
only MULTILINE Bulletin Board
For the 'ST'.



Chat Rooms, E-Mail, Message Base, Downloads.
Joint Subscription to Bath BBS & Warpzone Gold Club
JUST..£15.00

Modems available at very special prices

BATH BBS. P.O. BOX 1589. BATH. BA1 3TJ

MIDI

MIDI-20	SYS-EX Kit (2 DISK SET £2.75)	'D'
MIDI-19	Alchemie Jar (good sequencer)	'S'
MIDI-17	Recording Studio Utilities	'S'
MIDI-12	Henry Cosh Sequencer	'S'
MIDI-14	Name That Tune (111 midi files)	'S'
MIDI-01	PSS special (just for PSS k'boards)	'D'
MIDI-03	Create an album from 43 SNG files	'S'
MIDI-04	42 SNG files with CZ101 player	'S'
MIDI-05	to 08 each disk has 40 SNG files	'S'
MIDI-10	CZ & DX editors & librarians	'S'
MIDI-11	Picture show with 10 midi songs	'S'
MIDI-14	Name That Tune + 111 midi files	'S'
MIDI-16	Sound Shifter.. Yamaha PSS editor	'S'
MIDI-17	Recording Studio Utilities	'S'
Keep track of your tracks with this prog suite		'S'
MIDI-18	DX & FB01 editor & librarian	'S'
MIDI-21	Feeling Partner & EZ Track demo's	'D'
MIDI-22	Super Conductor sequencer + utils	'D'
MIDI-09	32 Track Sequencer + utils	'S'

COMMS

COM-02	Galactic Empire.. Great on-line game..	'S'
You will need two ST's & null modem cable		'S'
COM-03	Vanterm 4.0 (best PD comms prog)	'S'
COM-04	Uniterm (Excellent terminal prog)	'D'
COM-07	Freeze Dried Terminal	'D'
COM-08	View D/L files when off-line + 4	'D'
COM-05	D-Term with Z-modem module	'S'
COM-06	Mo-Term Elite (for buffs)	'S'

GAMES

GAM-79	VIOLENCE (brill shoot-em-up)	'D'
No. 4 in December's STR PD Game TOP TEN		
GAM-98	Bubbles McGee/Viking + 6 more	'D'
GAM-07	Clowns & Missile (8-bit clones)	'S'
GAM-22	AstroDodge/Subhant + 10 more	'S'
GAM-28	Question of Snooker/Frogger + 1	'D'
GAM-34	X-word/Bugs/Warrior + 2 more	'D'
GAM-36	Klaxtrix/Entombed/Mr. Dice + 2	'D'
GAM-38	Caves of Rigel/Froggy/Harris	'D'
GAM-45	Die Alien Blob (very addictive)	'S'
GAM-51	Battleships (with speech) + 2 more	'D'
GAM-59	Dungeonz/Gravity/Maze + 3 more	'D'
GAM-60	Armour/Haunted/Quizical + 3	'D'
GAM-62	Bermuda Races/Geogiz + 2 more	'D'
GAM-67	Battle for the Throne/Video Vegas	'D'
GAM-68	to 70 Adventure Solutions.. Solutions to well over 100 adventures on 3 disks for £3.00	
GAM-73	Lazercrunch/Time Bandit + 7 more	'D'
GAM-74	Chess Nut + over 90 game cheats	'D'
GAM-76	Midimaze 2 + 2 more	'D'
GAM-83	S.T.A.C. Adventure Writer Demo	'D'
GAM-84	Tetris/Drachen + 4 (MONO games)	'D'
GAM-85	Mutant Camel/Llamatron (1 meg)	'D'
GAM-88	Odeux & Sir Ramic Hobbs (adv.)	'D'
GAM-93	Mars Maze	'S'
GAM-95	Lazerball/Lazer Racer + 3 more	'D'
GAM-23	Go-Up/Novo/Target	'S'
GAM-30	Mix & Match + Plumb Crazy	'S'

EXTRA VALUE PACKS

7 Double Sided Disks full of programs, in a clear library case
only £8.99 per pack

MIDI Pack:

60 files inc. sequencers & music/midi files

DEMO Pack:

60 varied demo's for your entertainment

GAMES Pack:

47 of the best games from the world of PD.

EDUCATION Pack:

38 programs to help make learning fun!

BUSINESS Pack:

43 related programs, utilities & files

UTILITY Pack:

50 of the best assorted utilities in PD'dom

MUSIC Pack:

194 files to use & make music on the ST.

ART Pack:

The very best artwork and PD paint progs

SOUND Pack:

40 of the best pieces of computer music

ADVENTURE Pack:

Test your wits in many varied adventures

TAKE any TWO packs

For Only

£14.99

* Twinpack offer excludes library cases *

FREE

MULTI-GAME DISK
VOLUME 2
WORTH £2.50

For every customer placing an order of more than £7.50 !!
This offer is limited and will end by last post on Monday 18th January 1993
Please quote STR JANUARY issue.

MULTI-GAME DISK 1

STILL AVAILABLE

15 GAMES on a MENU DRIVEN DISK
only £2.50 inc. p. & p.

AVAILABLE NOW from WARPZONE PDL

ZZ Soft's EASY TEXT PROFESSIONAL
a full featured Desktop Publishing System

£34.95

fully inclusive of post and packing

PRICES

£1.50 per d/s disk

£1.00 per s/s disk

Catalogue disk inc. 700k s/w £1.00
only ONE FREE OFFER per order (exc. lib case)
Overseas orders in STERLING please.

WARPZONE PDL & BATH BBS

Would like to take this opportunity
to wish all their customers & friends
Past, Present and Future

A very merry CHRISTMAS
and a happy NEW YEAR

PD ZONE

Bring some life to your ST's screen with these great animation packages

IMAGIC DEMO

FLOPPYSHOP • DISK NO: ART.19 & ART.20 • £5.00 • MEMORY: 1MB • BANNERWARE



A wealth of well-designed icons line Imagic and make the package easy to use, despite its German prompts.

The excellent demo animation makes up a little for Imagic's lack of documentation. Learn the easy way – by example!

IN BRIEF: For the most part, the desktop video (DTV) revolution seems to have passed the ST quietly by, mainly due to a lack of software. *Imagic* is a package that aimed to change all that but sadly never found its way to the UK.

Animations themselves are created by stringing together small sequences on the digital workbench. *Imagic* includes its own graphics editor, or you can import your own in Degas format. The number of tools available is simply stunning and all are very easy to use. It's unclear exactly why this is a demo version – everything appears to be working perfectly!

The entire package is propped up by a beautiful icon-driven interface which is happy to run in mono or colour.

ST REVIEW COMMENT: "*Imagic* is uniquely powerful. Although the prompts are in German, the majority of functions are taken care of by some user-friendly icons – it comes very highly recommended!"

★★★★★

PEARLE AND BLASTRAM

FLOPPYSHOP • DISK NO: ART.10C • £2.50 • MEMORY: 1MB RECOMMENDED • PUBLIC DOMAIN



Pearle in all its glory. A picture of this kind of quality can take well over an hour to produce on a standard ST!

IN BRIEF: Have you got 12 hours to spare? What better way can there be to spend it than parked in front of your ST watching a raytraced picture slowly appear?

Raytracing is the process of calculating exactly where light will fall on a predefined scene, made up of basic shapes (mainly spheres it seems). This produces an extremely realistic picture

THE SPRITES PORTFOLIO

FLOPPYSHOP • DISK NO: BPRO.05 • £3.95 • MEMORY: 0.5MB • LICENCEWARE



Ye olde Budgie Sprites Portfolio is one of the best ways to make up for any lack of artistic ability.

IN BRIEF: No matter how good your programming skills, without a nice set of graphics, your game or demo is doomed to failure. *The Sprites Portfolio* is Budgie's answer to the problem and crams over 500, Degas Pi1 format sprites onto this single disk. For the programmers among you, the sprites are also aligned on 16 pixel boundaries for ease-of-use.

Topics covered are diverse and include fonts from The Lost Boys and several screens designed to fill a whole game. One of these is an isometric (3D) game in the *Airball/Cadaver* mould which would make the ideal setting for a PD game. Designs range from space age explosions and huge aliens to mediaeval stone walls and wooden doorways. There are a few substandard screens, but generally the quality is excellent.

ST REVIEW COMMENT: "Even if you don't use the sprites supplied directly, they're great examples of technique and could easily be modified to suit your needs. Essential stuff for programmers, without a doubt!"

★★★★★

ARTIST FREEHAND

L.A.P.D. • DISK NO: L.16 • £2.50 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: *Artist Freehand* uses blocks for animation. Just cut out the piece you want and assign it to a frame – it's as simple as that. This method is particularly good for testing the animation of sprites. Up to 99 frames can be defined – memory permitting – which should be plenty for most purposes. In terms of editing features, all the major tools are present and correct; nothing more, nothing less. The documentation is very sparse and split up into six sections (all under 1K per file!).

While fairly competent, *Artist Freehand*'s interface is a little bit tacky. It has neither NeoChrome's style or Degas' usability, but you can always plump for your normal package and just use Freehand for animation.

ST REVIEW COMMENT: "There's very little to actually dislike about this program, but somehow it just doesn't come together. It is however one of the few PD price art packages that will run in medium resolution."

★★★★★

complete with shadows and reflections. Unfortunately, due to the calculations involved it does take a long time – in Pearle's case anywhere between one and 16 hours per frame!

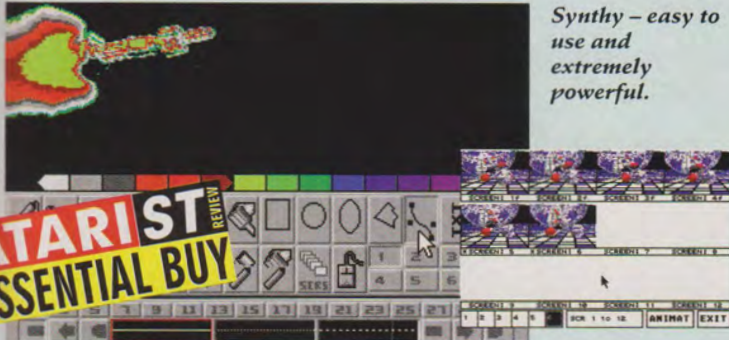
The ace up *Pearle*'s sleeve, however, is its animation. Each of the shapes in a scene follows the forces of gravity, and given enough time a whole raytraced animation will be saved to disk in Degas Pi1 format. The only limitation is the ST's 16-colour low-resolution screen – and your patience, of course! A fast display program, named BlastRAM, is also included on the disk for distribution with complete animations.

ST REVIEW COMMENT: "*Pearle* pictures are painfully slow in appearing, but the results are worth waiting for. At least the program runs unaided, meaning you can leave it to calculate an animation overnight."

★★★★★

SYNTHY

THE ST CLUB • DISK NO: DRG.51 • £1.45 • MEMORY: 0.5MB (1MB RECOMMENDED FOR ANIMATION) • SHAREWARE



Synthy – easy to use and extremely powerful.

IN BRIEF: Yet another art package tries its hand at the animation game. This time the specimen is a wonderful little French program with more than a passing resemblance to **NeoChrome**.

Stylish in the extreme, this is the Rolls Royce of ST art packages. Brass knobs include gradient fills, a large zoom area and full colour brushes. In addition to the standard Degas P11, file import includes The **Full Screen Construction Kit**'s 'KID' format, which is automatically split up into the four required quarters.

Unlike **NeoChrome**, the animation is flip-page, which could have been a problem if the number of screens in memory was limited. They're not, and any amount can be accommodated, right up to a whopping great 99 on a four Meg machine!

ST REVIEW COMMENT: "Great package! **Synthy** rivals **Crack Art** for features and the KID format support makes it the perfect choice for **Full Screen Construction Kit** fans."

★★★★★

SPRITE MASTER

FLOPPYSHOP • DISK NO: BPRO.3 • £3.95 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: STOS aside, sprite handling from **BASIC** is a real pain in the neck. **Sprite Master** aims to take some of the problems out of the procedure by producing a machine code routine to handle the sprites together with animation.

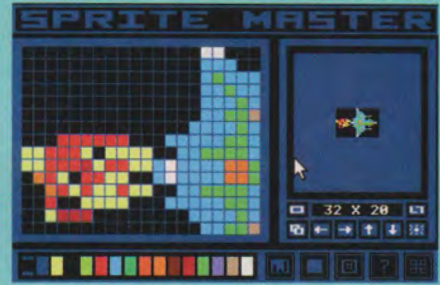
The program is split into two main sections – the designer and the

animator, all based in a graphical shell. The designer wouldn't win any awards, being nothing more than a magnified version of the sprite and a palette control, but it's simple to use and effective. The animator is equally functional, but for some reason the sprite begins its path behind the operations dialogue box, which can be annoying.

The on-line manual provided is excellent, but unfortunately it does take the place of any standard documentation. Should you want to use Budgie's **Portfolio** sprites, a program is provided to grab chunks from NeoChrome pictures in **Sprite Master** format.

ST REVIEW COMMENT: "If sprite handling from GFA or Fast BASIC is beyond you, **Sprite Master** is the disk to get. The lack of any printable documentation is frustrating, but not too serious."

★★★★★



One of the better example sprites buried deep in the editing suite.

TOP TEN ANIMATION PACKAGES

1 IMAGIC DEMO • FLOPPYSHOP • DISK NO: ART.19 & ART.20 • £5.00 • MEMORY: 1MB • BANNERWARE

The definitive ST desktop video package with a superb user interface. It may only be a demo by name, but to all intents and purposes this is a complete package. Whether it be animation, special effects or just a simple slideshow, Imagic is the package to get.

2 THE RUN • FLOPPYSHOP • DISK NO: DEM.477C • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

Not so much an animation package as an example of what you can expect to achieve with a little bit of effort. The plot is a simple cop chase, but the attention to detail is superb and it loops faultlessly. A 'mini' half meg version is available on DEM.476C.

3 FRACTAL ZOOM • FLOPPYSHOP • DISK NO: ART.23 • £2.50 • MEMORY: 0.5MB • SHAREWARE

Excellent fractal generator with built-in support for mini, animated 'journeys' through the colourful landscape. **Fractal Zoom** is a little slow at times, but it's extremely user-friendly and the results are stunning. For the impatient among you, plenty of ready-drawn designs can be found on-disk.

4 SYNTHY • THE ST CLUB • DISK NO: DRG.51 • £1.45 • MEMORY: 0.5MB • SHAREWARE

Synthy has a style that other packages can only aspire to. The animation facilities are good, but the 'flip-page' technique just gobbles up memory.

5 THE SPRITES PORTFOLIO • FLOPPYSHOP • DISK NO: BPRO.5 • £3.95 • MEMORY: 0.5MB • LICENCEWARE

The Budgie boys have come up trumps yet again with this collection of over 500 Degas sprites. Most are expertly drawn and are well arranged for inclusion in your games. A slideshow is included to give you an overall impression of what's available.

6 KOZMIC 2.5 • THE ST CLUB • DISK NO: DRG.45 • £1.45 • MEMORY: 1MB • SHAREWARE

The world's best pattern generator just got better. The hinted STE features have failed to materialise, but you now get 17 different mirror effects, sprites and an interface that is far easier to cope with. It's as pointless as ever, but even more fun to watch!!

7 BLASTER • THE ST CLUB • DISK NO: GRA.34 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

You've designed your animation with **Synthy** and now all you need is a program to display the screens quickly. Blaster does just that by loading them into a RAM-disk and is ideal for distributing your PD animations to the

world. Admittedly it's not inventive, but you're unlikely to need anything more.

8 LAMPS DEMO • FLOPPYSHOP • DISK NO: DEM.167C • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

A strange animated tale of two desk-lamps – a mother and a child – produced with the Imagic graphic compiler. The plot is taken from an award winning, raytraced animation and while not up to the high standard of the original, is very entertaining to watch. The whole thing lasts around one and a half minutes.

9 SPRITE MASTER • FLOPPYSHOP • DISK NO: BPRO.3 • £3.95 • MEMORY: 0.5MB • LICENSEWARE

Design and animate your sprites with the minimum of hassle courtesy of **Sprite Master**. The resulting routines can easily be called from most versions of BASIC, full details of which are provided in the on-line manual. The example sprites are awful, but you can always import something a little better from the The Sprites Portfolio.

10 PEARLE & BLASTRAM • FLOPPYSHOP • DISK NO: ART.10C • £2.50 • MEMORY: 1MB RECOMMENDED • PUBLIC DOMAIN

This is a raytracing-cum-animation package that is capable of producing some beautiful scenes. Creating your own designs from scratch is a little on the tricky side, thanks to the lack of a proper user-interface, but with the help of the example that is provided it can be mastered.

MERRY CHRISTMAS FROM WIZARD PD

If you are paying 99p for 1 program on a disk you must be MAD!!

Look at these example disks from our collection, all are full double sided

ART 07 Superb art package, idea for simple DTP, 23 built in fonts. A4 size paper works in mono chrome for best quality of print. Ideal for leaflets, snapshot & 1mg compressor inc.

ADV 01 DDST, DUNGEONS & DRAGONS, Role playing adventure, PARANOIA, ENCHANTED REALM and ELBOZO CITY. 3 more good adventures also on this disk.

ARC50 HACMAN, superb pacman clone. MR PACKY, another super-pacman. SOCCER brilliant 3D football game 2 players. MUTANT WIPEOUT ariel shoot em up. INVADERS needs no description.

BRD04 CHESS, superb chess game. DECODER, excellent mastermind. SUPER SIMON, computer version of hand held game. DOMINOES, puzzle game. GOLF, card game. Also on this disk DRAGON MAZE, 2 game. SENSORI BACKGAMMON, BRIDGIT, ST ARTREK, BATTLESHIPS.

ARC14 HOME, and L ORB 2 super pinball games. GALTIC RANGER, unusual shoot em up. MONKIES & BALLONS, bounce the clown and burst the balloons. FIRESTORM, another good arcade game rescue the humans. LAZERBAL, super game and interesting version on the pinball theme. Also on this disk LOST TREASURE, WIDOW MAKER, SLALOM & BREAK OUT.

AST 01 PLANETARIUM simply the best PD Astronomy program. SKYMAP another great Astronomy program plus aSTronomer.

BRD 01 LAZERCHES, OTHELLO, CHECKERS, WHEEL OF FORTUNE, and more a superb collection of BOARD GAMES.

DON'T MISS OUR CHRISTMAS BONUS PACKS

WPR 01 ST WRITER V4.2 and FIRSTWORD, The 2 best word processors for the ST(E) plus a spell checker, print spooler and a selection of ready to use letters.

ODD 07 THE WORLD OF STARTREK Over 300K of text interviews and biographies from the original STARTREK and NEXT GENERATION plus loads of pictures from both series. A must for all TREKKIES!!!

ARC 04 TETRIS, superb tetris game (see review in issue 1 of this mag). KLAX TRIX, WELTRIS & FETSID, 3 more good games on the tetris theme. MR DICE, COLLAPSE & BURGER, 3 more good games to fill this super value disk.

ALL LATEST BUDGIE TITLES

EST. 1989 **WIZARD P.D.** 24 HOUR ORDERLINE

178, Waverley Rd, Reading, Berks, RG3 2PZ Tel: 0734 574685

For disk catalogue send blank + S.A.E. OR 70p
Paper or disk catalogue free with order on request
P.D. Disks 1£2.25 2+.....£2.00

We will give you a FREE DISK AND TEN FREE LABELS with every order and a FREE GAME with orders over *** £40 ***

CLASSIC STRATEGY GAMES

Frontline	19.95
Vulcan	17.95
Borodino	9.95
Overlord	17.95
Ancient Battles	19.95
Space Crusade	19.95
Strategy Masters	25.95
Conflict Europe (ST)	17.95

ADVENTURE GAMES AT £15.95

Captive, Hunter, Manhunter 2, GoldRush, Windwalker, Chronicles of Omega

BEST SELLER SPECIALS

Sensible Soccer	18.95
Formula 1 Grand Prix	22.95
Castles	18.95
Pushover	18.95
Zool	18.95
Wizard	18.95
Striker	17.95
Mega Sports	18.45
Daemonsgate	24.45
Aquatic Games	18.45
Lotus Ultimate Chall.	18.45
Lemmings + More Lemmings	22.95
Smash TV	7.95
Hudson Hawk	7.95
Total Recall	7.95
Robo Cop III	17.95
Jaquar	18.95
Red Zone	18.95
Epic	18.95
Plan 9 From Outer Space	24.95
The Adventurers	18.95
Twin World	9.95
Ultima VI	23.95
Head Coach 3	18.95
Soccer Supremo	18.95
Action Pack	18.95
Mix and Match	18.95
Dungeon Master/Chaos Strikes Back	18.95

COMPILATIONS

Light Force	6.95
Smasher Collection	6.95
Edition I	6.95
Movie Stars	7.95
The 16 Bit Hit Machine	7.95
Magnetic Scrolls Collection	7.95
The Capcom Collection (8 titles)	2.99
Super Heroes Collection	7.95

PRODUCTIVITY

Protext V4.2	49.95
Cyber Paint	39.95
Mailshot Plus	29.95
Utilities Plus	9.95

BARGAINS AT £5.95 EACH

Atomium - Dominator	Fun School 2 - Apprentice
Galaxy Force - Rotor	Time Machine
Int. 3D Tennis - Sonic Boom	Flight & Magnus
Table Tennis Sim	Tank Attack - Photon Storm
Clownmania	Bloodwych Data
Mooshy Racer	Backgammon
Crunch Wave	Stunt Car Racer
The Toytopies	Starblade
Fighting Soccer	Ghouls & Ghosts

OR ANY TWO FOR £9.95

SPECIAL STE DEALS

ALL COMPUTER PACKS INCLUDE THE GAMES HQ STARTER PACK!
* 10% Off 1st Software Order!
* 10 Top Titles!
* 10 Blank Disks!
* Free Mouse Mat!
* Free Joystick!
* Sixteen Nights Free Holiday Accommodation

WORTH £100!

DISCOVERY XTRA PLUS 520 STE With: Final Fight, Sim City, 9 Lives, Robot Monst, 1st Basic, Neochrome, ST Tour, 1st Word, Ani - ST £244.95!

FAMILY CURRICULUM II 1040 STE With 4 Modules! Play and Learn, Junior School GCSE Revision, Family Computing £289.95!

The Falcon Is Here

1Mb Ram	£479
4Mb Ram/65Mb Drive	£879

3.5" DISKS W/LABELS

	DSDD	DSHD	PHONE FOR GREAT DEALS ON JOY-STICKS
10 =	4.90	7.45	
50 =	23.95	33.95	
100 =	44.95	62.95	
200 =	74.95	114.95	

DISK STORAGE BOXES

12 Holder Slimpack	0.85
100 Holder Lockable	7.95
150 Holder Stackable	15.95
3.5" Disk Labels 50 for	0.95

RIBBONS

Star LC 10	Mono	3.35
Star LC 10	Col	5.50
Star LC 24/10	Mono	3.95
Citizen 1200	Mono	3.45

IF YOU CAN'T SEE WHAT YOU NEED, CALL US! WE CAN NORMALLY SUPPLY ANY ITEM!

MODEM USERS CALL GAMES HQ ON:

InfoSoft 0642 764245	Quantum 0217 070681
System ST 0533 413443	Dogers 0617 969061
Exchange 0913 831358	Cliffnet 0462 467324
Static 0224 648277	Black Cat 0222 707359
Infotel 0737 766027	Centronics 0473 273246
Folkstone 0303 245203	Dream Machine 0222 341713
Skull 0379 740972	Starship 0232 705338

SUPRA FAX MODEM

V32 BIS £259.95

P&P £1 PER ORDER

£2 EXTRA PER 50 DISKS

We accept all Major Credit Cards

*** GAMES HQ * BOX 17**
COULBY NEWHAM,
MIDDLESBROUGH CLEVELAND
TS8 9YW

TEL: 0642 595 182 FAX: 0642 822 700



L.A.P.D.

Quality P.D. for the Atari ST/STE 80 Lee Lane, Langley, Heanor, Derby, DE7 7HN, STR01
Tel: 0773 605010/761944



- * PD disks: £1.50 each *
- * BUDGET RANGE PD DISKS ONLY £1.00 each *
- * Budgie & Shoestring Licenceware ware disks £2.95 and £3.95 *
- * Commercial Games Software from only £2.99 *
- * Same day service, quality virus free disks *
- * PLEASE ADD 50p P&P (FREE ON ORDERS OVER £5.00) *

Here are just a few of the disks from our comprehensive catalogue (£1.50 each)

* GAMES *

- G.249 INSECTICIDE: Unusual ladybird shoot'em up with sampled sound. S/W
- G.247 MEGAPEDE: 1mb: Excellent reworking of the arcade classic. S/W
- G.250 CYBERNETICS: Good, challenging 'Defender' type arcade game. S/W
- G.246 HYSULA: A graphic 3D fantasy adventure set in the world set in the world of Hysula. S/W
- G.248 MATCHMAKER: Multi-level game of matchmaking by Dunces Cap Software. S/W
- G.244 OUTRAGEOUS FORTUNE: Latest shareware quiz program from Dave Cobbickied 1mb D/S
- G.197 DUNGEON LORD: 3 levels of 'Dungeonmaster' type adventure from the States 1mb
- G.221 GRAY 2: Superb 'Oids' type rotate and thrust arcade game.
- G.198 OMEGA: Large and complex wilderness and dungeon fantasy exploration game. 1mb
- G.217 THE MAZE: 3D adventure game based on 'The Crystal Maze' D/S
- G.277 IBS GUARDIAN: Sci-fi game in which you command a space battle-cruiser.
- G.235 MYSTERIOUS REALM: Fantasy text adventure with graphics. D/S
- G.222 GRANDAD AND THE QUEST.....: 3D graphic adventure by Ian Scott. Shareware 1mb
- G.234 COUNTOUT: Word puzzle game similar to Channel 4's 'Countdown'
- G.230 OBSCURE NATURALIST: Challenging, commercial quality, adventure with graphics.
- G.224 MRS. MUNCHIE: Pacman clone from the United States. 1mb D/S
- G.223 HARD CORE: Five level demo version of the latest Jeff Minter blast. 1mb
- G.211 MINDLOCK: Challenging new quiz game with trivia, maths, etc. 1mb STE's only
- G.201 BLAT!: Good, three-in-row falling block game with added features (STE only)
- G.115 MYSTIC WELL: Complete Dungeonmaster type adventure with save facility.
- G.215 BLACK DAWN: Sci-fi text adventure game with graphics by M.Dosantos. D/S
- G.200 ANARCHY ACADEMY: Ex Commercial 3D adventure, now released as shareware.
- G.219 ATOMIX: Latest challenging puzzle game from Tony Martin.
- G.218 TUG OF WAR: Frantic, two player joystick waggling game from Sweden. 1mb
- G.196 ARENA: 2 player arcade duel game by John Connors. 2 joysticks req (Not STE)
- G.159 VIOLENCE!: Classy vertical scrolling Xenon style shoot'em up (Shareware)
- G.171 HACMAN II: 1 megabyte version of Pacman, 100 new levels! D/S
- G.172 HERO II: Detailed, graphic role-playing adventure. (1mb required)
- G.173 PENGUINS: Move your penguins around the screen 'Lemming' fashion.
- G.208 FAST FREDDY: Cute arcade action as Freddy tries to save his girlfriend.
- G.140 A NIGHT ON THE TOWN: Meet the girl of your dreams... and the rest is up to you!
- G.131 STAR TREK - THE GAME: Defeat the Klingon threat to the galaxy. (1mb D/S)
- G.150 COLUMNS 1 & II: 2 good games similar to 'Tetris' by David Tierney. (1mb) D/S
- G.148 OZONE: Super commercial standard platform-arcade game.
- G.10 VEGAS: Roulette, poker, blackjack and slots...without the Nevada sand.
- G.170 T-GAME: Very good 'Tetris' type game of falling blocks.

BUDGET PRICE DISKS - ONLY £1.00 EACH

- B. 45 FIGHTING SAIL: Naval battles
- B. 42 CYBERSNAKE: Top rated action game
- B. 41 MR DICE: Good arcade/puzzle game
- B. 39 ASTEROIDS: A loving restoration
- B. 20 HACMAN: Pacman action
- B. 22 BREAKOUT: 2 x Breakout games
- B. 36 8 BALL POOL: Bar game simulation
- B. 34 LAPD GAME: Shoot'em up
- B. 44 FLY ROBIN: Cute shoot'em up
- B. 43 INT. MOTOR SPORT: Driving game
- B. 40 VALGUS: One or two player 'Tetris'
- B. 15 ROLL 'N' NUDE: Fruit machine
- B. 14 ROBOTZ: Classy arcade game
- B. 32 ESCAPE: Fantasy adventure
- B. 33 BLASTER: Fast 'Defender' action
- B. 37 NOIDS: Breakout clone

DEMOS AND OTHERS

- D.341 DIMENSION: Finnish party demo from the Condemned. D/S
- D.347 COSMIC JAM: Good multi-vector demo from Imagina of Finland. D/S
- D.346 BIRD MAD GIRL SHOW: Multi-screen demo from the French crew. Fraggles D/S
- D.330 NUTHOUSE: Biggest house music demo yet. 18 minutes of digi-music! 1mb D/S
- D.326 OUTDRIVE: Plasma Fractals, Glenz Vectors, etc by Aggression. D/S
- D.338 X-PLSION: Good multi-demo from Imagina of Norway. D/S
- D.325 CROSSBONES: STE demo (also known as RED SECTOR DEMO)
- D.322 MENTAL HANGOVER: Conversion of Amiga demo. (STE 1mb) (Licenceware £2.95)
- D.323 SLAM - HARDCORE DANCEFLOOR II - Wild Boys follow up to successful demo. D/S
- M.111 NORTHERN & EQUATORIAL STAR ATLAS: Superb serious astronomy program S/W
- M.116 COMPACT OFFICE MANAGEMENT: Accounts program for the small business D/S
- M.114 FRANGLASIS 3 & 4: Popular French tutorial programs.
- M.100 GERMAN TRANSLATORS: Programs for translating German into English.
- S. 70 MAD MAX CHIP MUSIC: 35 pieces of sound chip music from Mad Max. D/S
- U. 37 PREMIER PACKERS: 13 of the best program packers, plus a de-packer. D/S
- U. 44 THE DUPLICATOR: High speed copy program.
- U. 47 PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc.
- A. 47 PICTURE CONCEPT: Produce weird and wonderful effects on your own pictures.
- A. 45 CRACK ART: Excellent German art program that loads many formats. D/S
- A. 1 ANI ST: Ex-commercial animation program (once cost £60.00 to buy!)
- P. 24 MENU-MAKER: A French program that allows you to make your own menus with music, sprite and scrolling message. Excellent. D/S
- P. 33 ZX SPECTRUM EMULATOR: Emulate the old Speccy on your ST/STE. (1mb)
- M.106 ACCOUNT-ABILITY: Fully featured accounts program. 10 accounts, 2,000 transactions!
- M. 81 NEWSDISK: Construct your own newsletters and magazine disks.
- M.103 ULTIMATE CHEAT GUIDE: 320+ game cheats, plus hidden screens on 20 demos!
- U. 52 VAULT & TURTLE: Hard disk back-up utilities

BUDGIE U.K. & OTHER LICENCEWARE

- Full range of BUDGIE U.K. software available including the following:
- L. 22 GRAND PRIX MANAGER U.K.: Grand Prix management simulation, Employ drivers, mechanics, etc., test cars and parts, then race in a full grand prix season! (2 disks £4.00)
- L. 23 GRAY 2 SOURCE CODE: The full source code for Martin Brownlow's top rated game. Now you can see how to do it.
- L. 20 SUPER SPELL: Superb educational program for 4 to 9 year olds. (£2.50)
- L. 16 ARTIST FREEHAND: Excellent art package from C.Roberts (£2.50)
- L. 17 ADDRESS BOOK: Neat database for storing, sorting, etc. (£2.50)
- L. 18 CIRCUIT: Produce larger than screen electrical diagrams. 1mb. (£2.50)
- BU. 38 CROSSWORD CREATOR: Create your own word puzzles. (£2.95)
- BU. 50 SPACE INVADERS: The all time classic arcade game.
- BU.107 PLATFORM CAPERS: 'Donkey Kong' type platform game by Kay Downs. (£2.95)
- BU.106 HEADLONG: Frantic, high speed, fast reaction game by Gary Whately (£2.95)
- BU. 89 HORSE RACING SIM: Quality sim from the sale ring to the track. (£2.95)
- BU. 71 DARK WARS: Role play adventure with 3D view. (£2.95)
- PRO.20 VIDEO MASTER: Excellent video titling program. (£3.95)
- PRO. 1 ELECTRONIC BANK STATEMENT: Computerise your accounts! (£3.95)
- BU. 70 PACMAN ST: The definitive version by Robert Leong. (£2.95)
- L. 19 THEY SOLD A FEW: Logic problems, wild west shoot out and Clan from Ben Weston (£2.50)
- L. 14 DICEY: Yahtzy type dice game for 1 to 4 players. (£2.50)

FREE CATALOGUE

For a FREE COPY of our latest, user friendly, catalogue disk just send a blank disk and s.a.e. to the address above and we'll send you one by return complete with a selection of quality PD including super 'MATCH IT' game and FONECOAST utility. Alternately send us £1.00 and we'll send you the same catalogue and free programs on one of our disks. (Please quote STR03)



CUSTOMERS WORLDWIDE ARE FINDING WE ARE THE ONES TO DEAL WITH FOR QUALITY AND SERVICE



PD ZONE

POOLWISE 3.8

SOFTVILLE ● DISK NO: MISC.76 ● £2.00 ● MEMORY: 0.5MB ● SHAREWARE

	P	N	U	L	P	R	T	IP
MANCHESTER UNITED	27	15	9	2	48	21	57	172
LEEDS UNITED	28	15	11	2	51	23	56	172
LIVERPOOL	28	12	12	2	35	24	48	138
SHEFFIELD WEDNESDAY	27	13	8	3	43	33	47	131
MANCHESTER CITY	28	13	8	7	42	32	39	117
ARSENAL	27	18	9	9	48	38	48	188
CHelsea	28	18	9	9	48	38	48	188
ASTON VILLA	28	11	5	5	34	32	38	97
EVERTON	28	9	9	8	36	33	36	90
CRYSTAL PALACE	28	9	9	8	36	33	36	90
TOTTENHAM HOTSPUR	28	9	9	8	36	33	36	90
OLYMPIA	28	9	9	8	36	33	36	90
QPR	28	9	9	8	36	33	36	90
NOTTINGHAM FOREST	28	9	9	8	36	33	36	90
SHEFFIELD UNITED	28	9	9	8	36	33	36	90
WIMBLEDON	27	9	9	8	36	33	36	90
COVENTRY	27	9	9	8	36	33	36	90
MILWAUKEE	27	9	9	8	36	33	36	90
HULL CITY	27	9	9	8	36	33	36	90
WEST HAM UNITED	27	9	9	8	36	33	36	90
LEIGH TOWN	27	9	9	8	36	33	36	90
SOUTHAMPTON	27	9	9	8	36	33	36	90

Plan your route to wealth with a copy of Poolwise.

A familiar GEM interface waits in the sidelines, ready to spring into action at the touch of the 'Prediction' button.



ATARI ST
ESSENTIAL BUY

IN BRIEF: It may be 'a funny old game' for some people, but to the pools pundit, football is deadly serious. **Poolwise 3** is the latest get-rich-quick program to appear on the shareware circuit and comes ready programmed with all teams and data up to early this year.

A few hours spent entering the latest scores should have you up and running and then it's simply a case of asking the computer for a prediction. **Poolwise** is even smart enough to take into account whether the team has the advantage of playing at home or not!

The interface uses a pleasant mixture of GEM and its own full-colour, custom design. Unfortunately, this means the program only runs in medium resolution, which is not ideal for clarity. Eye-strain aside though, there's very little to complain about - it's easy enough to use and will at least provide something to blame when you lose!

ST REVIEW COMMENT: "**Poolwise** won't guarantee you a win by any means, but it manages to stand up well against the competition in terms of usability. The ready-to-run teams data also adds to the appeal."

★★★★★

GEM TRACE

FLOPPYSHOP ● DISK NO: UTL.3321 ● £2.50 ● MEMORY: 0.5MB ● PUBLIC DOMAIN

IN BRIEF: **GEM Trace** puts a stop to some of the problems encountered with GEM: it prints the current GEM routine in the top right-hand corner of the screen (yes, right over the GFA menu bar!). The ST, being the mini-rocket it is, often executes these instructions far too fast for you to read, so a keyboard combination is provided to slow things down to a manageable level. It's also possible to step through a program routine by routine. OK, the machine will still hang, but at least you know exactly where to start debugging!

ST REVIEW COMMENT: "**GEM Trace** is the ideal companion to any GEM legal programming language. The lack of an 'off' toggle can be a little annoying, particularly within **GFA BASIC**, but the convenience on offer more than makes up for any small niggles."

★★★★★

Whether it's help with the pools, your homework or programming, you should find something to suit you in the latest batch of public domain utilities

FONTEDIT

FLOPPYSHOP ● DISK NO: UTL.3226 ● £2.00 ● MEMORY: 0.5MB ● MONO ONLY ● SHAREWARE

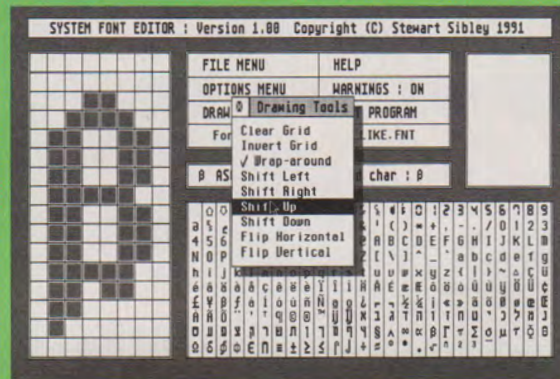
ATARI ST
ESSENTIAL BUY

IN BRIEF: Functional is the best you can say about Atari's system font. Looking at a Mac - or even a PC for that matter - will bring home to you how much a nice-looking font can improve a machine. **Fontedit**, as the name suggests, allows you to edit your ST's system font, or load a completely new one if you prefer. Two examples are provided on disk including a Mac-esque 'Chicago' font and one way-out face.

The editing itself is fairly basic, but it's difficult to imagine how you could make editing a 16x8 font more powerful. You can always, of course, opt to import characters from a Degas picture if you crave more power. The interface is a GEM replica and looks great. The menus may seem more or less the same at first glance, but take a closer look and you'll notice some trendy shadows and they're also far quicker than their GEM counterparts.

ST REVIEW COMMENT: "Font editors are 10 a penny, but most are bolted on to other memory wasting utilities. Once a **Fontedit** face has been installed, it uses no memory whatsoever - which has to be pretty unique."

★★★★★

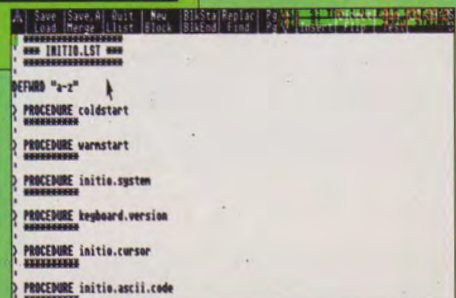


Fontedit is one easy way to change the ST's mega boring system font for something a bit more trendy.



GEM Trace provides an invaluable, constantly updated display of the current GEM AES and VDI routines.

Handy as it may be, **GEM Trace** does cause conflicts with certain applications, GFA Basic being one example.



WORKOUT

GOODMAN ENTERPRISES ● DISK NO: GD.1651 ● £2.75 ●
MEMORY: 0.5MB ● FREWARE



Workout is set up to do its bit for European unity, but that can be changed with the built-in editor.

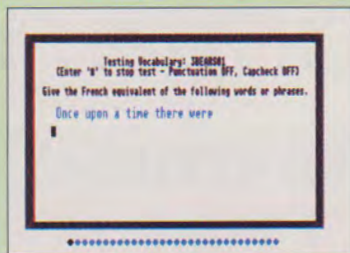
IN BRIEF: *Workout* describes itself as a 'universal revision aid' and can be used to learn practically anything, from Latin verbs to Outer Mongolian traffic regulations!

As supplied, the program is set up with some French vocabulary, just as an illustration of what can be achieved. Basically the lessons themselves are question and answer sessions, the design of which we are told, complies to C.I.L.T. guidelines on language learning. Redefining the questions is easy, providing you know your subject well.

The interface, while not particularly inspirational, is colourful enough and makes a change from the mono-GEM approach. No rewards are provided for completing a lesson, but as the author says, the program is designed for adults who know the value of learning and don't require 'beeps' or pictures as motivation.

ST REVIEW COMMENT: "*Workout* is certainly more flexible than the majority of learning programs that are available in the public domain, but it's not quite up to the standard of many commercial offerings."

★★★★



This is what I call a workout! French verbs, elementary grammar and not a barbell in sight!

THE STOS ADVENTURE CREATOR

MTS ● DISK NO: P.70 ● £2.00 ● MEMORY: 0.5MB ● SHAREWARE

IN BRIEF: They say everybody has one book in them and I suppose the same could be said of adventures. It's one of the few areas where imagination comes before a degree in programming, and with the likes of *STOS Adventure Creator* around, things are made even easier. So why not let your imagination run wild and come up with that PD masterpiece that's been struggling to get out?

Constructing an adventure with *STAC* is just a matter of typing in your locations together with the connections and objects - this is very easy indeed, providing you have a basic map of what you want to do. To achieve anything useful with the package, however, you really need a copy of *STOS* itself. The files produced can then simply be loaded and spruced up with your own ideas which is straightforward enough with the help of the manual. Ideal if you've been looking for an excuse to buy *STOS*!

ST REVIEW COMMENT: "The main problem with the *STOS Adventure Creator* is the parser - two-word interfaces went out with the ark! But for sheer simplicity, it's worth a look."

★ ★ ★

The creator itself is text based and easy to use.



TOP TEN UTILITIES

1 DMJ GIF 3.0 ● THE ST CLUB ●
DISK NO: GRA.146 ● £1.45 ●
MEMORY: 0.5MB ● SHAREWARE

DMJ GIF is the latest program to receive the upgrade treatment. Enhancements include slightly faster dithering routines, a brand new user interface and batch processing. The best GIF converter by miles!

2 MINT ● THE ST CLUB ● DISK NO:
UTL.147 ● £1.45 ● MEMORY: 1MB
● PUBLIC DOMAIN

MinT is the basis of the Falcon's new multi-tasking operating system. The public domain version allows you to run as many TOS programs as you wish alongside a single GEM application.

3 EQUATORIAL ATLAS ● SOFTVILLE
DISK NO: MISC.77 ● £2.00 ●
MEMORY: 0.5MB ● SHAREWARE

Take a look at the sky at night in the UK and you're only likely to get one thing - wet! But thanks to *Equatorial Atlas* you can now stare into space from the comfort of your own living room. This is a very comprehensive program and offers good documentation.

4 DESKJET RESET ● FLOPPYSHOP ●
DISK NO: UTL.255 ● £2.50 ●
MEMORY: 0.5MB ● PUBLIC DOMAIN

The HP DeskJet has an annoying habit of ignoring the ST if the computer was

switched on first. The only solution up until now has been a system reset. This accessory sends a reset signal to the DeskJet and manages to solve the problem completely.

5 TURBO 705 ● THE ST CLUB ●
DISK NO: DMG.31 ● £1.45 ●
MEMORY: 0.5MB ● SHAREWARE

Turbo 705 is the best RAM-Disk/printer spooler utility available. Not only is it reset-proof, but the spooler replaces GEM's print routine with its own, actually increasing print speeds in some cases! An excellent configuration program makes installation a breeze.

6 AUTOGEM ● RIVERDENE PDL ●
DISK NO: UTL.617 ● £2.50 ●
MEMORY: 0.5MB ● SHAREWARE

TOS versions up to 1.2 suffer from the problem of not being able to autoboot GEM applications. This is particularly annoying on floppy systems where a disk might only contain one application. *AutoGEM* patches the operating system to run almost any GEM application you could care to throw at it.

7 EPSJET ● FLOPPYSHOP ● DISK
NO: UTL.405 ● £2.50 ● MEMORY:
0.5MB ● PUBLIC DOMAIN

One particularly annoying feature of older software is the lack of DeskJet support. *Epsjet* attempts to help out with this difficulty and make your life a

bit easier by emulating the Epson MX-80 (a relative of the FX), with varying degrees of success. The program runs from the AUTO folder and is completely transparent.

8 STICKY MOUSE ● THE ST CLUB ●
DISK NO: UTL.207 ● £1.45 ●
MEMORY: 0.5MB ● PUBLIC DOMAIN

Sticky Mouse puts the usually dormant right mouse button to good use as a 'sticky' left button. Of course it won't work with any programs that use the right mouse button themselves, such as *Calamus*, but otherwise this is an excellent idea.

9 DC MOUSE WRAP ● FLOPPYSHOP
DISK NO: UTL.3226 ● £2.50 ●
MEMORY: 0.5MB ● PUBLIC DOMAIN

Mouse Wrap is a program that allows your pointer to move freely out of the right border, reappearing on the left, and vice versa. Love it or hate it, it'll save you and your rodent friend a whole lot of time!

10 MEGA DEPACK ● FLOPPYSHOP
DISK NO: UTL.3226 ● £2.50 ●
MEMORY: 0.5MB ● PUBLIC DOMAIN

There's nothing more annoying than finding a public domain program crunched with an inefficient packer. *Mega Depack* allows you to unsqueeze these files - over 40 different file types from 14 packers are supported - and crunch them using your chosen program. Source code is included for the brave amongst us to use.

PD4U

PUBLIC DOMAIN AND SHAREWARE LIBRARY

4 SINTONVILLE AVENUE BELFAST BT5 5DG

Telephone enquiries: 0232 672338

EXCLUSIVE!

THE MOJO

Mouse/joystick Switcher

Impact resistant ABS case

LED status indicators

Connects to mouse port

compatible with ALL ST's

"If you want a mouse switcher,
then buy this one"

ST FORMAT Issue 37

Automatic MOJO £14.95

Manual MOJO £11.00

CABLES

LOOKING FOR A SPECIAL LEAD?

We can provide you with ANY type of
cable, no matter how odd-ball. Give us a
ring to discuss your requirements.

GAMES

Any 2 titles on 1 d/s
disk, except items
marked "X"

G003 NOVA
G006 GALAXIANS
G012 PENGUINS
G018 REVMUT CAMELS
G005 ROBOTZ
G008 STARWARS
G016 QUIZZICAL
G021 KLATRIX
G023 PLUMB CRAZY
G035 HOTWHEELS 1Meg
G037 X-WORD COMPILER
G043 ATOMS
G048 INT. CRICKET
G086 ASTEROIDS
G066 BLASTER
G070 LASERCHESS
G065 MONOPOLY
G068 X ADVEN. CREATOR
G062 QUIZ CONST.KIT
G060 TENNIS
G033X BUBBLE GHOST
G086 MYSTIC WELL
G096 ALIENATION
G097X LIGHT CYCLES

ART/GRAPHICS

A001 NEOCHROME
A003 KOSMIC
A027 ANI-ST
A062 CRACK ART 1Meg
A053 FRACTAL ZOOM 3.1
A040 3D PICTURE
A033 FUN FACE
A034 VIDEO TITLER
A032 PALLETTE MASTER
A045 TRIP-A-TRON
A048 BOWL OF SOUP STE
A050 GALMOUR S/SHOW
A051 PIN-UPS S/SHOW
A046 AVANT VECTOR

DTP/WORD PROCESSING

D042 FONTKIT
D010 ST WRITER ELITE
D051 CLIP ART
(Trees, birds, fish, etc)
D052 CLIP ART
(People, logos etc)
D058 IDEALIST/X-COLUMN
D040 DELUXE FONT
MASTER

UTILITIES & OTHERS

U057 SELF-XLZH MAKER
U049 GOGO ST etc
U064 STD CAT v5.0
B005 FASTBASE
B007 DOUBLE SENTRY
B003 GEM CALC
B012 TOOS
K006 MINI MAGIC
STORY BOOK
K005 MASTER DOODLE
K002 PLAY SPELL
K007 1st 500 WORDS
S006 NOISETRACKER
S013 FRACTAL MUSIC
COMPOSER (MIDI)
M002 ASTRO 22
M030 BLITZ COPIER
M018 MENU MAKER
M019 POOLS PREDICTOR
D055 PAGESTREAM FONTS
D057 PAGESTREAM FONTS
D062 CALAMUS FONTS
D083 CALAMUS FONTS
D045 LABEL MAKERS
D050 PAGESTREAM UTILS
M029 HARDWARE MODS

XMAS & NEW YEAR SPECIAL

Choose any title **FREE**
for every 5 disks
Offer open until 21 Jan 1992

THE PD4U CATALOG

For a copy of the latest
disk catalogue send a
blank disk or
cheque/PO for £1

DISK PRICES

1-4 DISKS £1.50ea
5-9 disks £1.30ea
10+ disks £1.00ea
Prices include P&P
for Europe. Rest of
world-please add
15% to order for
air-mail delivery

THE ULTIMATE PD USER'S GUIDE

A series of packages that deal
with the specific aspects of public
domain software and show you
how to get the best out of your
programs.

Call or write for further details!

COMING SOON!

A big THANK
YOU to all our
customers. We
wish you well for
the New Year

AIR WARRIOR

Fly the most accurate flight simulator ever created.
Fly against the most deadly opponent known, real
people! From bi-planes of WWI to jets of the Korean
War, know what it was really like to fly. Air Warrior
simulates the world of the real ACE.

"...best flight simulator ever." Amiga Format

"thrilling ... the greatest experience in flight
simulator history." PC Format

"unparalleled ... amazing ... huge." NCE

"game dynamics impossible to duplicate in
conventional computer simulation." Omni

"incredibly realistic flight simulator." What PC

Amiga, Mac Color & Mono, PC and ST £34.99

Air Warrior includes: Two comprehensive
manuals, Campaign Map, Terminal/Off-line Trainer,
Data disks, Free Host membership. £30 of connect
credit. Modem offer

For further information call On-line on 081-558 6114.
642a Lea Bridge Road, London E10 6AP.
Host 081-539 6763.

AIR WARRIOR



PD ZONE

All work and no play makes Jack a dull boy – we bring a little light into your life with our look at the best of the current crop of PD games

HUNCHY

MERLIN PD • DISK NO: MPD.0966 • 99P • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Hideously deformed guy meets girl; girl falls for guy; girl gets kidnapped – see your role coming? Yep, it's your job, as Hunchy, to dash along the blisteringly colourful castle walls in search of the fair Ezzy.

In fact, you may well find the whole plot a little bit too familiar, because it's a reworking of Ocean's classic 8-bit game, *Hunchback*. A few bells and whistles have been added to catapult the game into the 90s including power-ups, extra lives and numerous other nice touches.

All graphics have been ripped from the Bitmaps' *Gods* and are excellent quality, but as for charging a shareware fee – naughty, naughty!

In fact, the whole game would hold together really well if it were not for the infuriating collision detection – move anywhere within six miles of an arrow and you're history! It's just not on when the original game owed its success to pixel perfect controls...

ST REVIEW COMMENT: "Plagiarised graphics and plot and a substandard control system. I'm beginning to wonder whether PD authors have their imagination removed at birth! A shame really – with a little more effort it could have been a classic."

☆☆☆



Hunchy's irrational control system puts a nail in the coffin of what could have been a good game.

MINDLOCK

GOODMAN ENTERPRISES • DISK NO: GD1650 • £2.75 • MEMORY: 0.5MB • SHAREWARE

While nicely presented, Mindlock's questions are far too difficult for the target age group.



If all of the categories were set at the same level as the maths section, Mindlock would be an excellent educational package.

IN BRIEF: Oh no, surely not another one of those incredibly embarrassing general knowledge quizzes? Well no, this one seems to be slightly more original!

Mindlock is a mixture of game styles and tries to take the boredom out of the standard 'question-and-answer' format. The game starts with the Skillmaster, the idea being to stop the cursor on a low figure, thus choosing the number of questions to answer.

Next up are the three main categories – general knowledge, maths and English. Just choose the correct answer from a list of three possible responses within the time limit given.

Your lives are taken care of by a little cartoon character known as Clarence – get three questions wrong and our poor little friend will be dumped on the spikes! Clarence is also responsible for providing some digitised encouragement.

ST REVIEW COMMENT: "*Mindlock* is a confused game. The style seems to be aimed at children, but the questions are far too difficult – after all, do you know the meaning of 'vituperate' or 'galbanum'?"

☆☆☆

CYBERNETIX

GOODMAN ENTERPRISES • DISK NO: GD1645 • £2.75 • MEMORY: 0.5MB • SHAREWARE

**ATARI ST
ESSENTIAL BUY**

IN BRIEF: *Cybernetix* is best described as a combination of *Asteroids*, *Defender* and *Xenon* (if such a thing is possible). Add some slick graphics and a selection of crisp samples and what you find yourself left with is something that is instantly addictive!

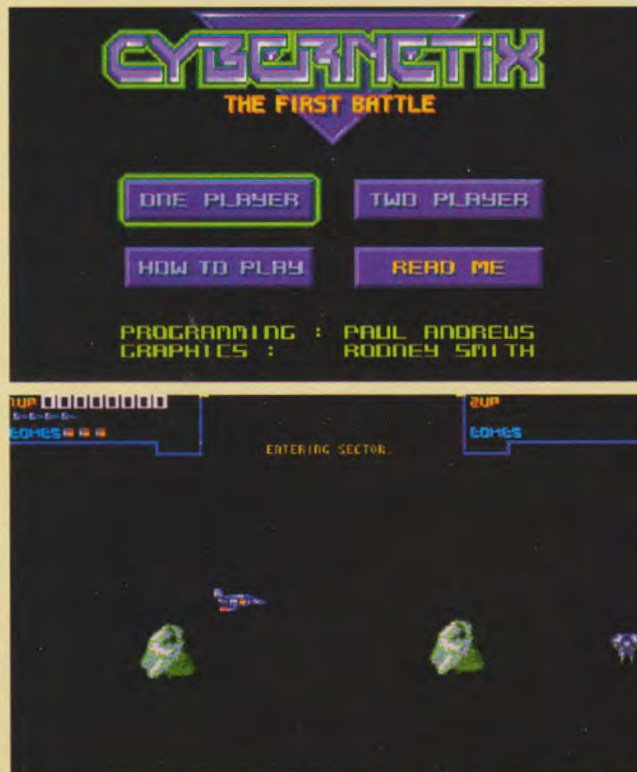
The idea is to fly your ship over the horizontally scrolling starfield, clearing asteroids and wasting any alien attack waves that make an appearance.

Each asteroid that you manage to destroy leaves a blue crystal in its wake and you have two choices: firstly you can pick it up for a juicy bonus, or secondly leave it to a 'grabber' alien (let him collect two and he will give you a power-up).

Linger too long on any level and an 'assassin' will race around the scenery. Some really crisp sound samples add to the atmosphere, with the occasional 'Attack Wave Detected' and a liberal sprinkling of explosions.

ST REVIEW COMMENT: "*Cybernetix*'s graphics are stunning and the sound will simply blow your socks off! Order your copy immediately!"

☆☆☆☆☆



A cunning combination of game styles and startlingly smooth presentation makes Cybernetix far too good to miss.

Destroy the asteroids, grab the power-ups and collect the crystals in Cybernetix – the best PD shoot-'em-up for ages!

KLATRIX

BLYTHER PD • DISK NO: CGP.1 • £2.99 • MEMORY: 0.5MB • PUBLIC DOMAIN



The excellent *Blat* was a tough act to follow, but *Klatrix* definitely scores well in the 'just one more go' department.

IN BRIEF: *Klatrix* is one of the second generation *Tetris* clones, based around the colour of the tiles, rather than the shape. The idea of the game – in common with most of this genre – is to stop the tiles piling up to the top of the play area by 'sliding' the colours with the fire button and forming lines of the same shade.

Different arrangements of colours yield different points according to their difficulty – columns being the easiest, while diagonals are the hardest.

And really, that's about it – the graphics are pleasant enough and the effects are pretty good. Unfortunately, you can't help comparing the game to *Blat*, which is far and away the better game, but a bit unfair considering it only runs on the STE. A noble effort all the same.

ST REVIEW COMMENT: "*Klatrix* isn't on quite the same scale as *Blat*, but for STFM owners, it's probably the best bet. Without a doubt, one of the best *STOS* games around!"

★★★★



Well-polished graphics put *Klatrix* a cut above your average *Tetris* clone.

SQUIDGEY

GOODMAN ENTERPRISES • DISK NO: GD1667 • £2.75 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Just as it's beginning to look as if the stream of public domain shoot-'em-ups and puzzle games is never going to end, along comes *Squidgey*.

Describing the game itself is tricky – it's all too easy to label it a puzzler, but it's obvious what you have to do and exactly how to do it. You just need the manual dexterity and patience to carry it all out, which is far harder than it looks. The aim of the game is to clear each of the 50 levels of blocks, by persuading our slimy hero to throw a duplicate. A mismatch simply piles on top of the existing blocks, meaning it takes even longer to clear the screen – still with me?

To add to your worries, the control system uses a mixture of joystick and mouse actions which allows you to select the different blocks – with just two extra hands it should be entirely possible to complete level 1!

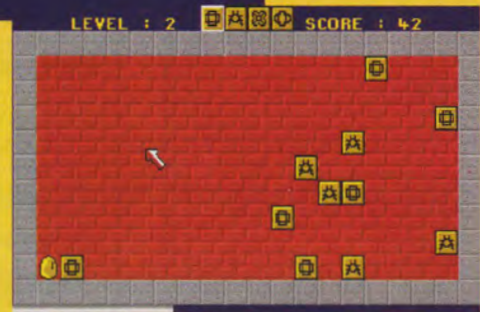
ST REVIEW COMMENT: "*Squidgey* is nothing spectacular, but it's original and fun to play. The mouse and joystick approach, however, takes a little while to get used to."

★★★★



Squidgey is terrifyingly cute and surprisingly good fun to play once you get used to the control system.

It's not likely to have a tremendous amount of long-term playability, but *Squidgey* is enjoyably original.



GONE TO THE DOGS

MTS • DISK NO: G253 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

Race 1
Greyhound Trophy Heat 1
Trap 1 Creature Feature -1
Trap 2 Dominoe -1
Trap 3 Too Short -1
Trap 4 Baron Bertram -1
Trap 5 Love Lost -1
Trap 6 Mercury -1
Nial
You have £ 100.00
Which type of bet would you like?
Enter W for win, E for each way,
F for forecast, H for reverse forecast
Make a selection by entering No. of dog.
You chose dog No. 2 Dominoe
How much would you like to bet? £ 100

Hi-tech it is not, but at least you only stand to lose £2.00 by gambling on *Gone To The Dogs*.

of the runners together with odds and the amount in your kitty. Bets placed, you move onto the race itself which is very entertaining (but, unfortunately, for all the wrong reasons). The dogs all look like they suffer from terminal constipation! An editor is included in case you get fed up with the original

IN BRIEF: Can it be true? Is it really possible to experience the thrill of dog racing from the comfort of your own living room? If you manage to stay awake – quite possibly...

Gone To The Dogs is a game for one or two players, the idea (obviously) being to amass a fortune from the measly £100 given to you at the start of the game. Each race is preceded by a list

selection of dogs, but *Gone To The Dogs* doesn't really offer anything that hasn't been done far better before.

ST REVIEW COMMENT: "Put aside the decidedly dodgy graphics and you're left with a very basic gambling game. It's fun for the first few tries, but don't expect miracles. At least it's cheaper than the real thing!"

★★



Go on Dominoe!! The racing screen is the highlight of the game, but the animation definitely needs attention...

CUT OUT 'N' KEEP ORDER COUPONS

Once again, here's the easiest way to get hold of the public domain packages featured on the previous pages. Just fill in the order form and send it to the address shown

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
The ST Club, 2 Broadway,
Nottingham, NG1 1PS

NAME.....

ADDRESS.....

☐ SYNTHY £1.45

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
L.A.P.D, 80 Lee Lane,
Langley, Heanor,
Derbyshire, DE7 7HN

NAME.....

ADDRESS.....

☐ ARTIST FREEHAND £2.50
☐ PEARLE & BLASTRAM £2.50
☐ SPRITE MASTER £2.50

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
Floppyshop ST, PO Box
273, Aberdeen, AB9 8SJ

NAME.....

ADDRESS.....

☐ IMAGIC DEMO £2.50
☐ THE SPRITES PORTFOLIO £2.50
☐ GEM TRACE £2.50
☐ FONT EDIT £2.50

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
Goodmans Enterprises, 16 Conrad
Close, Meir Hay Estate, Longton,
Stoke-on-Trent, Staffs, ST3 1SW

NAME.....

ADDRESS.....

☐ CYBERNETIX £2.75
☐ MINDLOCK £2.75
☐ SQUIDGEY £2.75
☐ WORK OUT £2.75

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
Merlin PD, 11 Grange
Close, Minchinhampton,
Stroud, Glos., GL6 9DE

NAME.....

ADDRESS.....

☐ HUNCHY 99p

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
Blythe PD, Copes Farm,
Withington, Leigh, Stoke
On Trent, Staffs, ST10 4PU

NAME.....

ADDRESS.....

☐ KLATRIX £2.99

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
MTS, Dept. STR, Greens
Ward House, The
Broadway, Totland, Isle Of
Wight, PO39 0BX

NAME.....

ADDRESS.....

☐ GONE TO THE DOGS £2.00
☐ STAC £2.00

PLEASE SEND ME THE DISK/S TICKED BELOW:-

ATARI ST REVIEW

FROM
SOFTVILLE, 35 Market
Parade, Havant, Hants.,
PO9 1PY

NAME.....

ADDRESS.....

☐ POOLWISE £2.00

Announcing: THE 7th International COMPUTER SHOW



Incorporating the
16 Bit Computer Show

Sponsored by:



The show specialising in everything for your ATARI computer
- **Business, Education, Music, Video and Entertainment**

19, 20 & 21 February 1993

Wembley Conference and Exhibition Centre, Hall 1
Nearest Tube station - Wembley Park (Metropolitan and Jubilee Lines)
3000 car parking spaces

**Pre-Purchase
your fast
lane tickets
by 12th
February to
save money
and avoid
the queues.**

Ticket prices on the door: £6

Under 10's, Students, OAPs
and unemployed: £4
(identification required)

In advance: £5
and
Under 10's: £3

Bring the family for a great day out

**Interactive demonstrations and presentations
including all the latest new products from ATARI**

**Major feature areas, Competitions,
Advice centres and terrific bargains**

**Also on show - products for
PC, Acorn , Commodore
computers and games consoles.**

**Westminster
EXHIBITIONS**

**Ticket
hotline:
0726
68020**

To: International Computer
Show, PO Box 68,
St. Austell PL25 4YB

Please send me _____ Fast Lane Tickets @ £5.

_____ Under 10's Fast Lane Tickets @ £3

I enclose a cheque / P.O. / Credit card details for £ _____ made payable to
International Computer Show

Name _____

Address _____

Postcode _____

Credit Card No. _____ Expiry date _____

OR phone 0726 68020 to book with credit card



**Westminster
Exhibitions
Limited,
Surrey House,
34 Eden St.,
Kingston,
Surrey
KT1 1ER**

All trademarks and
tradenames are the
property of the respective
manufacturers

SPACE
GUN
ONLY £5.99

CHEAP !!!

TV SPORTS
FOOTBALL
ONLY £5.99

ANY 3 £5.99 GAME FOR £15

FLIGHT OF THE INTRUDER £6.99

First Samurai £5.99
Wolf Pack £5.99
Kick Off 2 £5.99
Player Manager £5.99
RVF Honda £5.99
Captain Blood £5.99
Precious Metal (Captain Blood, Super Hang on, Arkanoid, Xenon) £5.99
Untouchables £5.99
Voyager £5.99
Captain Fizz £5.99
Victory Road £5.99
Plotting £5.99
Tie Break Tennis £5.99
Renegade £5.99
Rambo 3 £5.99
Operation Thunderbolt £5.99
Flight of the Intruder £5.99
Killing Cloud £5.99
Light Force Compilation £5.99
Sly Spy £5.99
Midnight Resistance £5.99
Audio Sculpture £5.99
Colonels Dequest £5.99
Hayles Book of Games 1 £5.99
Hayles Book of Games 2 £5.99
Black Cauldron £5.99

FALCON CLASSIC COLLECTION £12.99

Man Hunter 2 £5.99
Gold Rush £5.99
Rolling Ronny £5.99
Ninja Warriors £5.99
Gemini Wing £5.99
Judge Dredd £5.99
Xenon £5.99
Continental Circus £5.99
Planetfall (Infocom) £5.99
Viz £5.99
Double Dragon £5.99
Spot £5.99
Zork One (Infocom) £5.99
Zork Two (Infocom) £5.99
Monty Python £5.99
Golden Axe £5.99
Shinobi £5.99
Navy Seals £5.99
Darkman £5.99
Pang £5.99
Nightbreed £5.99
Robocop 2 £5.99
Bloodwych £5.99
Total Recall £5.99
Chase HQ 2 £5.99
Narc £5.99

SUPERSPACE INVADERS £5.99

DUNGEON MASTER £9.99

Airbus £5.99
Micro Prose Golf £5.99
Sensible Soccer £5.99
Microprose Grand Prix £5.99
Flames of Freedom £5.99
Jimmy Whites Snooker £5.99
Aquatic Games £5.99
Lure of the Temptress £5.99
Lemmings £5.99
Oh no not more Lemmings £5.99
Robocop (James Bond 2) £5.99
Robocop 3 £5.99
Populous 2 £5.99
Epic £5.99
Addams Family £5.99
Hook £5.99
Parasol Stars £5.99
Shuttle £5.99
WWF £5.99
Lotus 3 £5.99
Heimdahl £5.99
Silent Service 2 £5.99
M1 Tank Platoon £5.99
Carl Lewis Challenge £5.99
Knights of the Sky £5.99

SMASH TV £7.99

£21.99
£21.99
£16.99
£21.99
£19.99
£14.99
£16.99
£14.99
£14.99
£15.99
£16.99
£14.99
£19.99
£15.99
£15.99
£15.99
£14.99
£21.99
£19.99
£16.99
£21.99

EDUCATIONAL

SHAPES AND COLOURS £5.99 FIRST LETTERS £5.99
TELLING THE TIME £5.99

PHONE FOR DETAILS OF OUR

NEW ST DIRECT BARGAIN PRICE USERS CLUB !! ALL THE SOFTWARE YOU NEED AT INCREDIBLY LOW DIRECT PRICES !! ALL DIRECT SOFTWARE IS SOLD TO MEMBERS AT DISCOUNTED PRICES BEFORE IT IS ADVERTISED

DON'T MISS THE BARGAINS !!!

FIRST SAMURAI £5.99

XENON 2 £5.99

WOLFPACK £5.99

CONFLICT IN EUROPE £5.99

3D CONSTRUCTION KIT (INC VIDEO) £14.99

TRIVIAL PURSUITS £5.99



Please send orders to:
ST DIRECT

Unit 3, Cross Keys Shopping Mall, St. Neots, Cambridgeshire PE19 2AU

Tel: (0480) 471311

P&P is FREE within the UK



PIT
FIGHTER
£5.99

SHOP PRICES MAY DIFFER

PREMIUM BULK 3.5" DS/DD DISKS

25 10.99
50 20.50
100 36.99
250 84.99
500 164.99



ALL DISKS ARE FULLY GUARANTEED
AND ARE COMPLETE WITH LABELS

3.5" SUPERIOR LOCKABLE DISK BOXES

100 Capacity 4.49
120 Capacity 6.49

3.5" PREMIUM DISKS WITH OUR BOXES

100 Cap. box + 50 3.5" DS/DD 24.49
120 Cap. box + 100 3.5" DS/DD 42.99
90 Cap. Bank box + 50 3.5" DS/DD 29.49

3.5" BANK BOX - 90 CAPACITY

A SUPERB PRODUCT WHICH IS BOTH
LOCKABLE AND STACKABLE

ONE 9.95
TWO 18.95
THREE 26.95



SNAP COMPUTER

SUPPLIES LTD

HOTLINE

0703
457111

RIBBONS - POST FREE

Full Mark Brand	2 off	4 off
	PRICE EACH	
Citizen 120D/124D Swift 24	2.75	2.55
Citizen Swift 24 Colour (Compat)	12.95*	
Panasonic KXP 1080/1123/1124	3.25	3.05
Star LC10/LC20	2.60	2.40
Star LC10-4 Colour	5.90	5.70
Star LC24-10	2.95	2.75
Star LC24-10 Colour (Compat)	9.95*	
Star LC200	3.00	2.80
Star LC200 Colour (Compat)	9.95*	
Star LC24-200	2.95	2.75
Star LC24-200 Colour (Compat)	9.95*	
Ribbon re-ink	12.95	

Minimum order - 2 ribbons, except those marked with an asterisk *

ACCESSORIES - POST FREE

Mouse Mat	2.99
Mouse Holder	2.99
2 Piece Universal Printer Stand	6.99
3.5 Disk Clean Kit	2.99
Roll 1000 3.5 Disk Labels	8.99
Printer Cable (1.5 metre)	3.99
Atari ST dust cover	3.50
Phillips monitor cover	3.99
Star LC10, Star LC20 covers	
Star LC24-10, Star LC24-200 covers	3.99

All products are subject to availability - All prices include VAT.
Please add £3.50 p+p for disks and boxes. E&OE.



SNAP COMPUTER SUPPLIES LTD Fax: 0703 457222
Unit 16, The Sidings, Hound Rd, Netley Abbey, Southampton SO3 5QA



ST BUYER



The Seikosha SL-90 will add style and speed to all your documents and it's up for grabs in the Blues competition on page 120.



Roland's Boss PC-200 (top) and PC-150 (above) are great value-for-money master keyboards.



Discover the time-saving world of Desk Accessories on page 100 and follow our step-by-step guide to using the program included on the cover disk.

Hello and welcome to ST BUYER – the blue pages of ST Review. This is the part of the magazine that will get your brain cells bursting with more specialised information about using the world's best home computer.

This month we show you all just how useful accessories can be. There are a couple of tasty desk accessories on cover disk two this month (see page 23) and we show you exactly how to install them in an easy, step-by-step guide starting on page 100.

Continuing your learning curve this month, the latest instalment of our HiSoft tutorial on page 118 shows you how to write your own address book using HiSoft BASIC as included on the cover disk of issue four.

Our Blues section competitions always offer useful add-ons and this month is no exception – on page 120 we give you the chance to win a Seikosha printer worth over £230.

On page 104 we continue showing you how to set up your own Public Domain library for fun and profit. This month we tell you how to set up a business plan to provide yourself with a healthy business.

MIDI monthly starts on page 111 and continues its look at the ST and music – including a review of two brand new and affordable Roland keyboards

And don't forget – there's still a host of regular articles this month including: Comms, Ask the Experts, Learn the Lingo, Letters, and much, much more!

Remember – don't get down, get the Blues!

PROBLEM SOLVED!

PART ONE – DESK ACCESSORIES

In the first part of a new series, Andrew Wright gives some advice on one of the GEM operating system's most useful facilities, DAs, and shows you how to install them – step by step. . .



Desk accessories come in all shapes and sizes – if there isn't one to cover a specific task, it probably isn't worth doing anyway. The complicated process of installing and uninstalling them can be a little off-putting but if you follow our step-by-step guide below, which shows you how to install the accessory FINDER 20.ACC from this month's cover disk, it should all fit into place.

USES

So what exactly do DAs do? To answer the question properly requires you to know something about how normal programs work. When you run a normal program, which is achieved by simply double-clicking on its icon, it loads into the ST's memory and usually presents you with a list of options. Take a word processor such as

Firstword Plus, for example. It will offer you the opportunity to open a file or start a new document. If you then use the word processor, it will remain in memory as you work. You won't be able to run any other programs, of course, so if you suddenly decide that you need to draw an illustration, you will have to quit the program, load an art package, draw the picture and then reload the word processor.

BACK TO THE BEGINNING

Quitting the program releases all the ST's memory again and returns you to exactly where you were when you started the program in the first place.

The Falcon's MultiTOS operating system, incidentally, will change things completely.

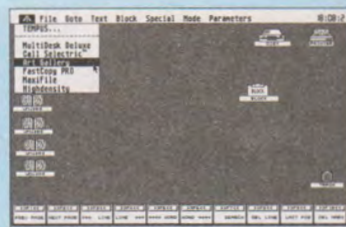
You will be able to load and run the art package in another window alongside the word processor, a process known as multi-tasking.

For the moment, however, we're only concerned with STs that are currently available.

AUTOMATIC REACTIONS

Some programs don't actually need your input at all. They will execute and quit automatically, returning you straight to the desktop again.

Examples include utilities to reverse the screen colours or reset the machine – essentially they are

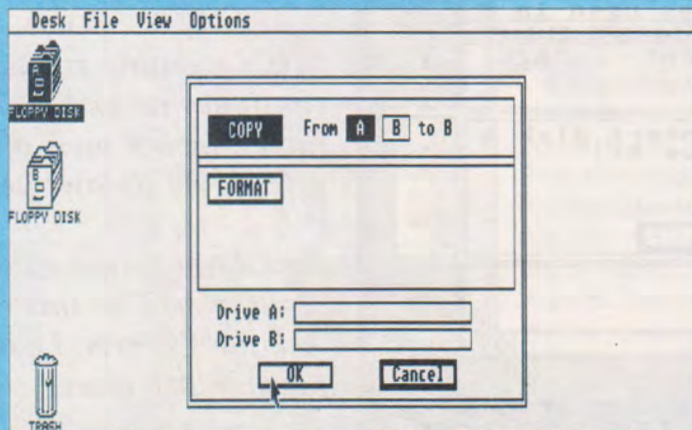


DAs can be found hiding under the Fuji sign in some programs. . .

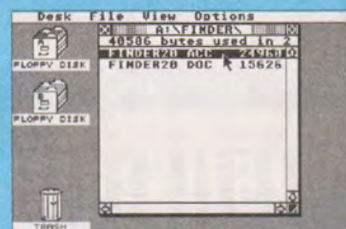
STEP BY STEP

INSTALLING THE FINDER ACCESSORY

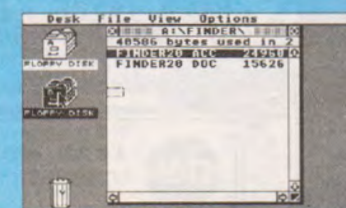
Everyone starts up their ST with a boot disk even if it's only to start it up faster. The boot disk should contain two vital elements, the AUTO folder containing various TSR programs to enhance the system, and the DAs



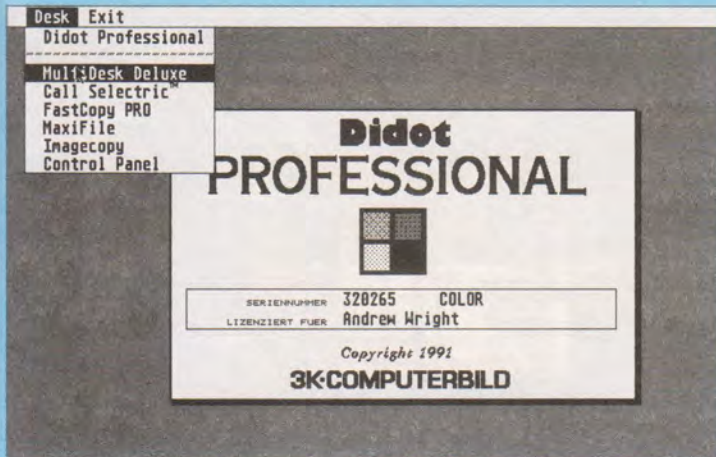
- 1 Format a blank disk using the Format command in the File menu or a dedicated formatting utility. This is your boot disk.



- 2 Place the master disk containing your chosen accessory (the cover disk) into your floppy disk drive, drive A. Select the appropriate file (accessories have an ACC extension) using the left mouse button.



- 3 Click once on the selected file, but keep the left mouse button depressed. Now drag the selected file across and drop it onto the Floppy Disk B icon, ensuring that the icon turns black. If you have done this correctly a COPY FILE(S) dialogue box will appear. Click on the OK button or press the Return or Enter key.



...or hidden away completely – in Prism Paint, for example, you have to click on the relevant menu command to get to a separate screen.

programs that alter one or more of the system parameters. The important thing is that the ST's memory is left free once the program has done its job.

TSR GAMES

Yet another type of program will actually remain in the ST's memory even when it has finished doing its job.

Programs like this are called 'terminate and stay resident' programs or TSRs for short, and examples include anti-virus utilities which constantly scan disks and files for hidden viruses and

GDOS, the operating system extension used by **Timeworks** and many other programs.

DESK ACCESSORIES

DAs are a special type of program – they are similar to TSRs in that they remain in memory until needed but they can be used even while you are running another program in the normal way. A DA is run by moving the mouse to the leftmost menu on the menu bar, moving down the list that drops down and selecting the required accessory by clicking the left mouse button.

NAMES

The leftmost menu will be labelled 'Desk' if you are on the desktop, but it can have a variety of names when you are running a GEM program – often just a Fuji symbol. Some programs bypass or replace parts of the ST's operating system and prevent you from using DAs at all. Others such as **Protext** and **Didot** will let you access them in a rather more roundabout way. DAs have to be installed at boot time by the operating system (see the step by step guide on these pages), but they are quick and convenient to use because they are already in memory when you call them and don't have to be loaded from disk.

MULTI-TASKING

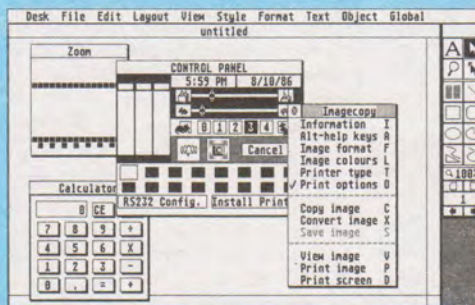
This offers a limited degree of multi-tasking: users can switch almost instantly from an application such as a word processor to

any one of several accessories and then back again, as if all of them were running at once. They aren't, of course: the program's operation is suspended while you use the accessory and then restarted when you switch back.

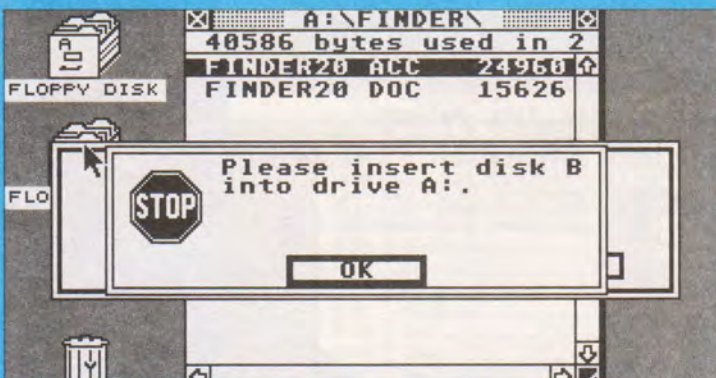
DIFFERENT STROKES

There are different types of DAs. Some use GEM windows of their own and this permits several accessory windows to be opened at once. Others take over the whole screen and require you to quit before you can do anything else. The main disadvantages of DAs, of course, are firstly that only six can be installed at once, secondly that they take up valuable memory, even when not being used, and thirdly that they can't be unloaded without resetting the ST. Various utilities do exist for getting round these problems, but we'll look at them later.

When the ST boots, the operating system first looks for a folder named AUTO. It then executes all the programs inside this folder, in the order in which they were placed inside. Next, the operating system looks for any programs in the root directory with an .ACC extender and loads them into mem-



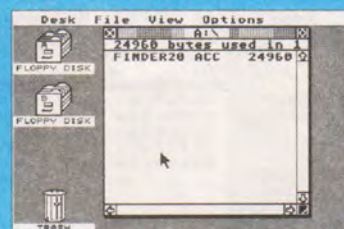
Several windowed accessories can be open at once – even with an application running.



4 After the ST reads the file a dialogue box appears asking you to insert disk B in drive A. This is your newly formatted boot disk.

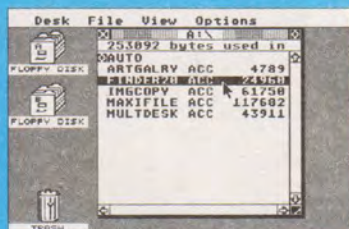


5 After more disk activity you will be asked to insert disk A (the master disk) in drive A. Do so, click on OK, and the GEM desktop will be restored to the same state as before.

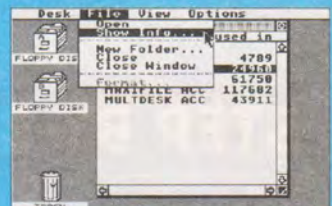


6 Insert the boot disk and press the Esc key. You will see the file that you have just copied across.

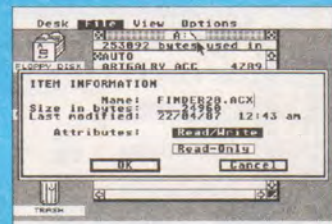
7 Now repeat the procedure for as many accessories as you want to copy across onto the boot disk. Remember to copy the resource files (RSC files) across too where necessary. If we try to reboot, in order to install the chosen accessories, only six will load. Assuming this is to be our boot disk, we need to determine which we want to load, up to six. We achieve this by disabling the ones we don't want to use.



8 To disable an accessory, select the ACC file with the left mouse button. In this example, I've put five accessories on the boot disk and added an AUTO folder (see over the page). However, I've decided to disable one of them.



9 Select 'Show Info...' from the File menu.



10 In the resulting dialogue box, rename the extender to something else. The easiest way is simply to type an 'X' which automatically overwrites the last 'C' in ACC, with the result that disabled accessories often have *.ACX extenders.

11 Reboot your ST, either by pressing the rest button or holding down the Ctrl, Alt and Delete keys simultaneously (except on pre-TOS 1.4 machines).

ory, placing their names in the free accessory slots.

The ST's operating system recognises accessories only by the special ACC extender - not because they are properly written accessories. In fact, you can rename any old text file with an ACC extender and TOS will try and load it as an accessory - with the expected result that your ST will bomb out and reset itself.

To access the DAs you have loaded, move the mouse pointer to the Desk menu and select one from the list which drops down.

You can't change the DAs that you have loaded except by rebooting and loading a different set. This may well entail disabling existing accessories and re-enabling those already disabled.

The principle is the same - to activate an accessory, ensure it has an *.ACC extender, to disable it, make sure it ends in anything but *.ACC (but it helps if you keep it consistent - renaming to *.ACX is the best method).

TROUBLESHOOTING

One of the biggest problems when using DAs is, of course, memory. Upgrading your RAM gives you the ability to install virtually any combination of accessories, whatever their size, without running out of memory. An accessory's physical size on the disk is not the same as the amount of RAM it uses.

Many accessories will reserve their own buffer areas or set aside extra space for data. The screen

grabbing utility, **SNAPSHOT.ACC**, for example, takes up only 7K of disk space but well over 40K in memory (the added 33K is for a screen buffer).

Compatibility can be another problem when using DAs. No matter how stable an accessory might appear, when it is installed alongside others it might well prove incompatible. There are hundreds of combinations of accessories and programs that don't work. They are impossible to document as the various TOS versions play a part in it too.

Music programs such as sequencers are notoriously difficult to get on with, but there are often clashes when accessories do similar jobs or affect the same parts of the operating system.

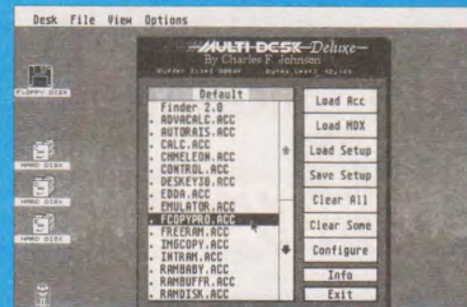
LITTLE LEFT

Another common problem is that some programs such as **Firstword Plus** use all available RAM when they are loaded. As a consequence, very little is left for any DAs which might also be required.

This is really an example of short-sighted programming, but it can cause problems for users. **Fastcopy Pro** and some other well-behaved accessories can actually set aside space for themselves - a kind of buffer - so that when called from within memory-hungry programs, they have room to run.

All this uses up memory, however, so it becomes a double-edged sword that you need to treat with some respect.

AIDING AND ABETTING



Multidesk - more accessories than a Mark 1 Ford Escort.

There are several utilities that are designed to help you get the best from your accessories. The first type overcome the ST's built-in limit of six accessories.

The commercial utility, **Multidesk**, which has recently been upgraded to incorporate even more features, and the PD utility **DC**

STUFFER come into this category.

Multidesk lets you run up to 32 different DAs at once (96 in the Deluxe version) despite the GEM limit. It also supports a second level of accessories which are not loaded into memory on boot-up but can be loaded from disk whenever required.

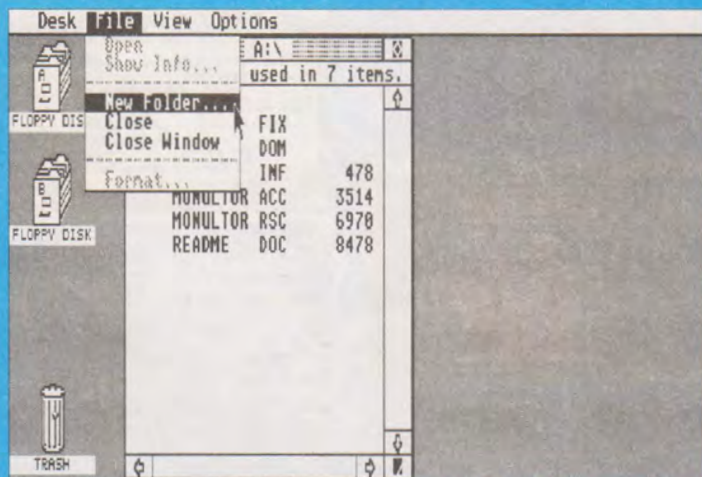
A second type of utility program lets you unload accessories 'on the fly' and add new ones when required. Examples include **Multidesk Deluxe** and the PD program **Chameleon**, which reserves a single slot and lets you load and unload from the desktop (though not from inside applications) without rebooting.

There are also programs to help you choose which accessories you need to load at boot time, many of which have other functions too. These are particularly useful if they allow various sets to be saved and reused. The best examples are fully featured bootup utilities such as **XBoot** or **Superboot** which also help with **DESKTOP.INF** and **ASSIGN.SYS** files but there are others such as **ACCLOAD** or **SELECTOR** which look solely after the accessory slots.

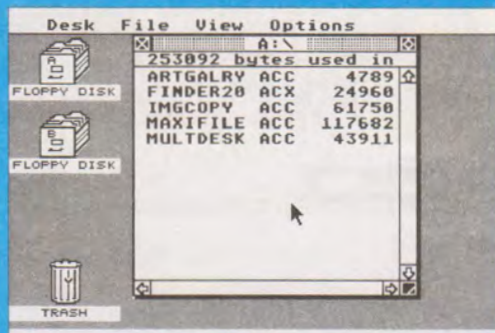
Finally, there are utilities that tidy up accessories, especially on hard disks. **ACC13**, on this month's cover disk, lets you store all accessories in a dedicated folder and patches the operating system so that GEM knows where to look at boot time. The step-by-step guide on this page shows you how to use **ACC13**.

STEP BY STEP

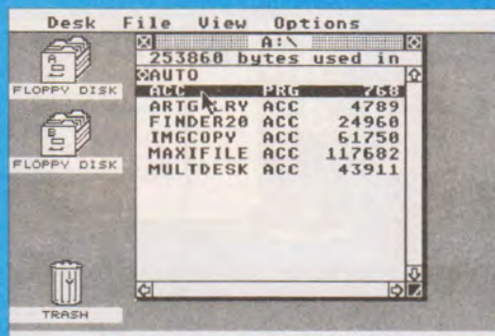
All that ACC13 requires is that you put it into an AUTO folder on your boot disk



1 Put your boot disk in drive A and look under the File menu for 'New Folder...'



2 Type the word **AUTO** in the dialogue box provided and click on **OK**.



3 Copy the file **ACC.PRG** across to the **AUTO** folder. Follow the procedure for copying an accessory file to your boot disk. Select the file on your boot disk and drag it onto the **AUTO** folder icon.

4 All that remains is to add a second folder, **ACCS**, to hold all your accessories and resource files. What a good way to tidy up your boot disk or hard drive!

PREMIER MAIL ORDER

Titles marked * are not yet available and will be sent on day of release. Next day service available - Ring for details.

Please send cheque/PO/Access/Visa No. and expiry date to:

Dept ST11, Trybridge Ltd., 10 Tinkler Side, Basildon, Essex. SS14 1LE. Please make cheques payable to Premier Mail Order.

Please state make and model of computer when ordering. P&P inc. UK on orders over £5.00. Less than £5.00 and Europe add £1.00 per item. Elsewhere please add £3.00 per item for Airmail. These offers are available Mail order only. Telephone orders: Mon-Fri 9am-7pm. Saturday 10am-4pm. Open Sundays 10am - 4pm Fax orders: 0268 271173. Tel Orders: 0268 271172

GAME	PRICE
2 Hot To Handle.....	16.99
3D Construction Kit.....	26.99
4 Wheel Drive.....	19.99
Addams Family.....	16.99
AirBus.....	22.99
Air & Sea Supremacy.....	19.99
Afterburner.....	6.99
Alien 3*.....	19.99
Altered Beast.....	6.99
Another World.....	19.99
A.P.B.....	6.99
Arkanoïd 2.....	6.99
Arsenal *.....	16.99
Assault on Alcatraz *.....	16.99
Award Winners.....	19.99
B17 Flying Fortress *.....	22.99
Batman Caped Crusader.....	6.99
Batman The Movie.....	6.99
Beach Volley.....	6.99
Beast Busters.....	9.99
Birds of Prey*.....	22.99
Blues Brothers.....	16.99
Bonanza Bros.....	16.99
Bubble Bobble.....	6.99
Cabel.....	6.99
California Games 2.....	16.99
Campaign *.....	22.99
Capcom Collection.....	19.99
Carl Lewis Challenge*.....	16.99
Castles.....	19.99
Champ Manager.....	16.99
Chaos Engine *.....	16.99
Chase HQ.....	6.99
Chuck Rock 2*.....	16.99
Continental Circus.....	8.99
Cool Croc Twins*.....	16.99
Crazy Cars 3.....	16.99
Cruise for a Corpse.....	19.99
Curse of Enchanta (1 Meg)*.....	22.99
Cyberball.....	6.99
Daley Thompson Challenge.....	6.99
DeathBringer.....	19.99
Deliverance.....	16.99
Deluxe Paint.....	39.99
Demonsgate *.....	22.99
Dizzy Collection.....	16.99
Double Dragon.....	8.99
Double Dragon 2.....	8.99
Double Dragon 3.....	16.99
Dragon Ninja.....	6.99
Dune*.....	19.99
ELF.....	16.99
Elvira 2 (1 Meg).....	24.99
Epic.....	19.99
Euro Football Champ.....	16.99
Eye of the Storm *.....	19.99
F15 Strike Eagle 2.....	22.99
F16 Combat Pilot.....	8.99
Final Fight.....	16.99
Fire and Ice.....	16.99
First Samurai - Mega Lo Mania.....	19.99
Flag *.....	19.99
Flight of the Intruder.....	14.99
Flood.....	8.99
Floor 13.....	19.99
Football Crazy.....	16.99
Football Director 2.....	16.99
Forgotten Worlds.....	6.99
Formula One Grand Prix.....	22.99
Fun School 4 Over 7.....	16.99
Games 92 - Espana.....	16.99
Gauntlet 2.....	6.99
Gauntlet 3.....	16.99
G Loc.....	16.99
Ghostbusters 2.....	6.99
Ghouls And Ghosts.....	6.99
Gobliins.....	16.99
Godfather Action.....	19.99
Gods.....	16.99
Graham Gooch*.....	19.99
Graham Taylor.....	16.99
Guy Spy *.....	26.99
Hard Driven.....	6.99

GAME	PRICE
Harlequin.....	16.99
Head Over Heels.....	6.99
Heimdall (1 Meg).....	19.99
Heroquest.....	16.99
Hero Quest Data.....	9.99
Hitchhikers Guide.....	7.99
Hong Kong Fuy.....	5.99
Hook.....	16.99
Hudson Hawk.....	16.99
Hunter.....	19.99
IK+.....	6.99
Immortal (1 meg).....	8.99
Indy Jones Atlantis-Action*.....	19.99
Int Spots Challenge.....	16.99
Ishar*.....	19.99
Jaguar XJ220 (1 Meg)*.....	16.99
Jimmy Whites Snooker.....	19.99
John Barnes (1 meg).....	6.99
Kick Off.....	7.99
Kick Off 2.....	9.99
Klaxx.....	6.99
Knightmare.....	19.99
Knights of the Sky (1 meg).....	22.99
K.O.2 Final Whistle.....	8.99
K.O.2 Winning Tactics.....	5.99
Laser Squad 2*.....	16.99
Last Ninja 2.....	5.99
Last Ninja 3.....	16.99
Leander.....	16.99
Leathel Weapon 3*.....	16.99
Leather Goddess.....	7.99
Legend.....	19.99
Lemmings.....	16.99
Lemmings Construction Kit *.....	16.99
Lemmings Data Disk.....	13.99
Licence To Kill.....	6.99
Lombard Rally.....	6.99
Lure of the Temptress.....	19.99
M1 Tank Platoon.....	19.99
Magic Fly.....	8.99
Magic Pockets.....	16.99
Man Utd Europe.....	16.99
Megasports.....	19.99
Mega Traveller 1 (1 Meg).....	19.99
Mega Traveller 2 (1 Meg) *.....	19.99
Mega Twins.....	16.99
Microprose Golf.....	22.99
Microprose Soccer.....	6.99
Midnight Resistance.....	6.99
Midwinter 2.....	22.99
Mig 29 Super Flacrum.....	26.99
Moonstone*.....	19.99
Myth *.....	16.99
NAM.....	12.99
New Zealand Story.....	6.99
Nigel Mansell World Champ*.....	16.99
Nightbreed-Action.....	6.99
Ninja Collection.....	13.99
Operation Thunderbolt.....	6.99
Operation Wolf.....	6.99
Outrun.....	6.99
Outrun Europa.....	16.99
Pang.....	6.99
Paperboy 2 *.....	16.99
Plan 9 From Outer Space.....	22.99
Platoon.....	6.99
Player Manager.....	12.99
Platoon.....	6.99
Populous.....	8.99
Populous 2 (1/2 Meg).....	19.99
Populous 2 (1 Meg).....	19.99
Powerdrift.....	6.99
Powermonger.....	19.99
Powermonger Data Disk 1.....	9.99
Power Up.....	19.99
Predator.....	6.99
Projectyle.....	8.99
Pro Tennis Tour 2.....	16.99
Psychos Soccer.....	19.99
Race Driven.....	16.99
Railroad Tycoon (1 Meg).....	22.99
Rainbow Collection.....	13.99
Rainbow Islands.....	6.99

GAME	PRICE
Rambo 3.....	6.99
Ramparts*.....	16.99
R.B.I. 2 Baseball.....	19.99
Reach for the Skies*.....	19.99
Red Baron*.....	22.99
Red Heat.....	6.99
Renegade.....	6.99
Risky Woods.....	16.99
Robin Hood.....	16.99
Robin Smith's Cricket.....	16.99
Robocod.....	16.99
Robocop.....	6.99
Robocop 3.....	16.99
Rock Star Ate My Hamster.....	4.99
Rotator*.....	16.99
R-Type.....	6.99
R-Type 2.....	16.99
Rugby World Cup.....	16.99
Run the Gauntlet.....	6.99
Ruff and Reddy.....	6.99
Secret of Monkey Island (1 Meg).....	16.99
Sensible Soccer.....	16.99
Shadow Lands.....	19.99
Shadow Warriors.....	6.99
Shinobi.....	8.99
Shoot Em Con Kit*.....	8.99
Shufflepuck Cafe.....	6.99
Shuttle.....	19.99
Silkworm.....	8.99
Silly Putty*.....	16.99
Sim City + Populous.....	19.99
Sim Earth*.....	19.99
Simpsons.....	16.99
Sleepwalker*.....	16.99
Space 1889 (1 meg).....	19.99
Space Crusade.....	16.99
Space Gun.....	16.99
Special Forces.....	22.99
Strider.....	6.99
Strikefleet.....	16.99
Striker.....	16.99
Strip Poker 2 + Data.....	6.99
Stunt Car Racer.....	6.99
Super Hang On.....	6.99
Super Tetris*.....	16.99
Switch blade.....	6.99
Switch blade 2.....	16.99
T.N.T 2.....	19.99
Team Yankee.....	19.99
Team Yankee 2.....	19.99
Teenage Mutant Turtles 2.....	16.99
Terminator 2.....	16.99
Their Finest Hour.....	19.99
Their Finest Missions.....	9.99
The Manager*.....	19.99
Thunderhawk.....	19.99
Titus The Fox.....	16.99
Toki.....	16.99
Top Cat Bev. Hills.....	6.99
TNT 2.....	19.99
Troddlers.....	16.99
Turbo Challenge.....	8.99
Turbo Challenge 2.....	16.99
Turbo Challenge 3.....	16.99
Turbo Outrun.....	8.99
Turrican 2.....	6.99
Ultima 6.....	19.99
UMS 2 (1Meg).....	19.99
Untouchables.....	6.99
Utopia.....	19.99
Utopia Data Disk.....	9.99
Voyager.....	6.99
Whizkid.....	16.99
Winning Team.....	19.99
Wizzball.....	6.99
Wolfchild.....	16.99
World Class Rugby.....	16.99
World Wrestling Fed.....	16.99
Xenomorph 2*.....	16.99
Yogis Great Escape.....	6.99
Yogi & Greed Monster.....	6.99
Zool Station*.....	16.99

JOYSTICKS

Fighter.....	£5.99
Quickjoy Turbo 2.....	£10.99
Quickshot 3 Turbo.....	£10.99
Quickjoy Jetfighter.....	£11.99
Quickjoy Topstar.....	£17.99

BLANK DISKS

Unbranded Disks

10 x 3.5" DSDD.....	£5.99
20 x 3.5" DSDD.....	£10.99
50 x 3.5" DSDD.....	£23.99
100 x 3.5" DSDD.....	£44.99

SPECIAL OFFERS

**WOLF PACK
NOW ONLY £9.99**

**KICK OFF 2 NOW
ONLY £9.99**

**STEVE DAVIS
SNOOKER
NOW ONLY £7.99**

RE-CYCLED FORMATTED DISKS

10 x 2.5" DSDD.....	£4.50
20 x 3.5" DSDD.....	£8.50
50 x 3.5" DSDD.....	£16.00
100 x 3.5" DSDD.....	£30.00

**NINJA
COLLECTION
NOW ONLY
£13.99**

**FIRST SAMURAI
NOW ONLY £9.99**

PART TWO

PUBLIC

Last month we gave some general advice on getting your own PD library off the ground. This month we continue with a more detailed look at getting your business plan together

To be effective, a business plan should be well-structured. It should begin with an overview – a brief description of the business, including details of why you are writing your business plan. Then it should state what business it is that you are planning to start and what geographical area you are aiming at.

At the end of the overview (this can't be filled in until your business plan is complete), you should state your expected turnover, profit, what finance you are seeking and what it will be used for.

BACKGROUND

The next part of your plan should itemise your background under the following categories

- **Personal Motives:** This should list your reasons for wanting to start a PD company and your skills.

- **Details of Management:** This is basically a C.V. of the person who is to manage the company, i.e. yourself. It should consist of the following details – name, address, date of birth, marital status, education, qualifications, employment since leaving school, references and interests.

SERVICES

The services section should list the following:

- **Description of Service:** This should describe the service that you are going to provide: whether

you will deal with just PD or some of the other categories of software, such as Shareware, Charityware, Licenceware or Freeware as we outlined last month.

It should also describe what other things you will sell – blank disks, labels, disk boxes and so on.

- **Price List.**

- **Future Development:** This should cover the next three years and show the ways that you hope to develop. For example, you might start to stock proper software as well, or you might want to sell computers. This could also include offering a membership scheme if it is something you are not going to do straight away.

MARKET ANALYSIS AND MARKETING

A business plan needs to take into account the market that you will be dealing with. You should concentrate on:

- **Location of Market.**

- **Market Size:** This will take a lot of working out and in this type of business it can be very difficult to specify. The easiest way to look at it is to find out the amount of Atari STs that have been sold since production first started and you could do a survey in your area of the amount of people who own Atari ST computers.

- **Customers:** This should describe what type of people your business is aimed at – for example,

people with an ST if you are solely stocking ST software.

Also, if you decide to specialise in one type of software such as demos, utilities or adventures then it will be aimed at the people who are interested in these.

Specialising does cut your market down considerably, but it also keeps your start up costs down.

- **Competitors:** Make a list of all the libraries you know, look at the things they offer, send away for some catalogues and build up a little file on them.

CUTTING OUT THE OPPOSITION

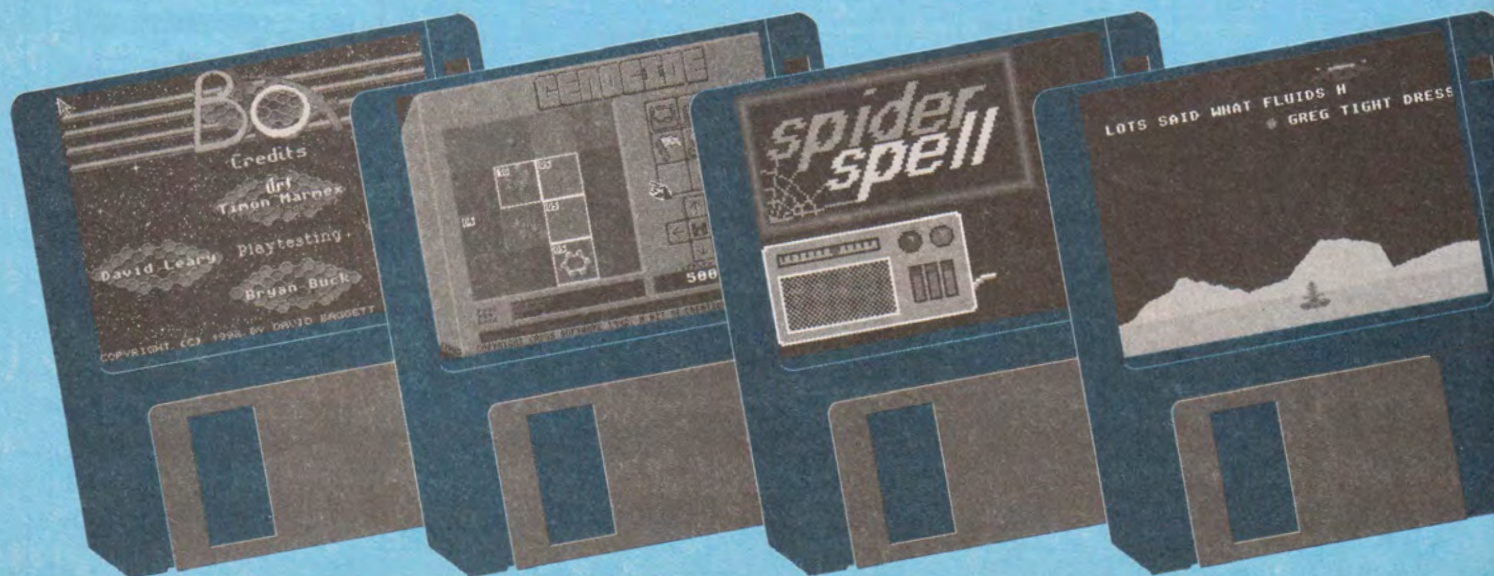
You should also cut out and keep any advertisements and promotional material given out by any competitors. By doing this you will be able to build up a profile of competitors and assess how you could project yourself better.

- **Sales and Advertising:** In this section you should write down an approximate chart of the sales you feel you could achieve in a week or month. You could work it out in the following way:

Say the PD company sells disks containing software at £1.50 a disk, normal disks at 33p each and disk boxes at £5.00. A chart could look like this

£1.50 a disk
10 disks sold a day, (including Saturdays) = 60 disks a week.

60 disks x £1.50 = £90.00 a week



PROPERTY

2 disk boxes a week = £10.00
100 blank disks = £33.00
Sales for that week would be
£133.00

ADVERTISING

The main source of PD advertising is in computer magazines or PD magazines. Your first choice would of course be computer magazines that deal with the specific type of computer that you are catering for.

You could put small postcards in shop windows in your area, if you want to advertise locally. Another good form of local advertising is newspapers. Your local newspaper would probably be interested in running an article about a new business starting in the town free of charge, especially if you placed a three-month advert with them for doing it.

DOING IT YOURSELF

Another source of your advertising would be your catalogue. Although these are often put onto disk nowadays, many people do prefer a printed catalogue so it might be an idea to give them a choice. Your catalogue should always be easy to use if it's disk-operated or well presented if it's printed. You could also put a discount voucher in: something along the lines of '£1.00 off first order' or 'Free disk with this voucher if you purchase more than three disks', might boost business.

LOCATION

In most cases you are likely to be working at home, at least to start with. You will need to think about:

● **Location of Premises:** Well, this depends on what was discussed earlier. Basically you need to describe the room in your house, that is whether you have your own room or if you will be working from a desk in the corner of the lounge. Make a note of how big the room or space is and what is in the space - a phone, desk, computer etc.

● **Cost of premises.**

● **Future needs:** This really does depend on your future development. If you have plans to stock software then it is advisable to get premises when this happens. However, if you just want to carry on stocking PD there's no reason why you shouldn't continue working from home.

CASH FLOW FORECASTS

Many people seem to find the cash flow forecast the hardest part to follow. Before starting a forecast, write down the costs of materials and an estimated amount of sales for each month.

Although it is very hard to estimate sales I always class the first month as slow, then gradually increase the amount for the next three or four months. Then around months five and six keep the sales around the same. Month seven can be a bad month as can month

eight. Then on months nine, 10, 11 and 12 the business really starts to excel and the sales go up considerably each month before finally levelling out and only increasing a little after that.

You should take into account the following:

● **Sales:** The amount of disks that you expect to sell each month.

● **Materials:** This is basically the purchasing of jiffy bags, postage, stamps and blank disks.

● **Wages:** You will have to keep this to a minimum for the first six months or so, or at least until you break even and the profits start to come in.

● **Adverts:** This would include adverts placed in magazines or newspapers or any leaflets you have printed yourself.

● **Electricity and telephone bills:** These are received every three months, but there are various

financial arrangements that can be reached, such as direct debit payments, made straight from the bank or Building Society to British Telecom or your local electricity company. You may find that this kind of regular standing charge eases the burden on you slightly, if only in terms of saving you the hassle of writing and posting a cheque, but do remember to allow for it in your budget.

● **Start-up costs:** These are things that you will need before your PD library can get underway.

You will obviously need software, a catalogue, lots of blank disks, anything else you might be stocking, a second disk drive, a modem might be useful for down loading programs, a printer, and a word-processor for typing letters etc to customers (when disks are out of stock), and I'm sure you can think of a few more.

USEFUL ADDRESSES

The Prince's Youth Business Trust (1992) offers grants of up to £1,500 or £3,000 for a group of people and loans of up to £5,000. Grants can be used for tools, equipment, transport, fees, insurance and training and loans can be used for stock, equipment or for working capital. To apply for the grants and loans you must be aged between 18 and 25 (under 30 for the disabled), with a business idea with a good chance of success, ready to start trading and have been unable to get all or part of the required funding from other sources. The Prince's Trust is a charity and has particular concern for young people who are unemployed or disadvantaged in some way. After sending them your business plan, if you are accepted and have started trading your own business adviser will be assigned to you. He or she will be on call with practical support and advice. The Prince's Youth Business Trust can be contacted at County Hall, Maidstone, Kent ME14 1XQ Tel: 0622 694280.

Next on the list is **Livewire**. They offer a service (not financial) to people between the ages of 16 and 25. If you contact them they will send you an action pack, which is filled with tips on starting your own business. If you then decide that you want to carry on with your business idea, they will put you in touch with an experienced business adviser within three weeks. Your adviser will help you put together a business plan. If you send a copy of your finished business plan to Livewire you could win an award in their annual Start Up competition. There is a cash prize and lots of much needed publicity. Their address is: Livewire, Freepost, Newcastle Upon Tyne NE1 1BR.

Another scheme worth looking into is the **Enterprise Allowance Scheme**. You have to have been unemployed for a minimum of eight weeks and have £1000 to put into the business (this can be a loan or an overdraft). If you qualify you will receive £40 a week for

your first year of business. Contact your local Job Centre for more information.



WORKING WITH

WRITE YOUR OWN ADDRESS BOOK – PART TWO

This month we continue the address book program that we began in issue eight



Last month we started writing a modular program, consisting of a short loop which waits for user input before calling one of several sub programs. You were also briefly introduced to the **FNform_alert** call which displays alert boxes. This month we will continue with the address book program, but first let's try to understand the alert box call a little better. What happens when you call **FNform_alert**?

FUNCTIONS

A function differs from a normal statement in that it always produces a result which you normally store in a variable.

Many functions are used to perform a task and report the result. A simple example is the XBIOS function **FNgetrez** which first checks the system and then reports the current screen resolution.

The instruction **a=FNgetrez** will store the current resolution value in the variable 'a'. You can then **PRINT 'a'** to see the resolution value or decide what your program should do. If you want your program to run in low resolution only, use the lines shown in step one at the beginning of the program. The address book program will run in all resolutions and does not require this code.

The alert function is a little more complex. When you call **FNform_alert** you're asking TOS to do many things - first the AES prepares the alert box and its icon in memory, then it saves the current screen portion to a special memory buffer. The alert box is then displayed onto that portion of the screen. At this point TOS and your program enter a loop waiting for the user to click on a button in the

EXAMPLE A

FOR i=0 to lines STEP 6 '

step through the array in steps 'of 6 (0,6,12,18,...)

IF INSTR(book\$(i),s\$ THEN...
NEXT i

box. TOS then removes the alert box by redrawing the original screen and the button number is returned as the result of the **FNform_alert** function. Up to three buttons can be used in an alert, numbered one to three.

More complex dialogue boxes are normally created with a resource construction set program such as **HiSoft WERCS** which also enables you to easily create and edit menus and icons. Later in this tutorial you will see how this is done. In the meantime we can go back to our program where alert boxes can come in handy.

LOADING THE ADDRESS FILE

Last month we concentrated on the general structure of the program and on creating and saving the address book file to disk. Now we will see how to load the book and how to search for an address or a telephone number in the file.

Sub load_book should simply open the address book file, load it into the **book\$()** array and of course store the total number of entries in the book. The total number of lines is found by simply incrementing a variable for each line in the file until the end of the file. The sub must therefore share **book\$()** and the variable 'lines' with the rest of the program. The first time the user runs this program, there will be no address file and the program will fail to find it. This would normally result in a crash. To prevent this, we use the BASIC function **FEXISTS**. This

function checks whether a file exists or not. Step two shows how the new program should look.

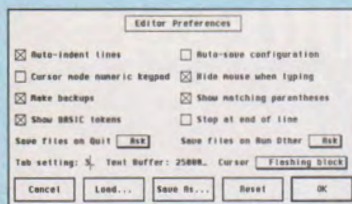
FINDING A NAME

The most important function of a computerised address book is the ability to search for a name and retrieve the corresponding address and phone number. Since each cell contains six lines, we only need to search for a name every six lines. This is done with another useful **BASIC** function; **INSTR** can be used in a similar way to **FEXISTS**. To search through the array for the text string 's\$' we use the form shown in example A.

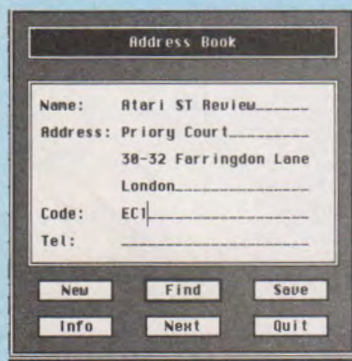
INSTR is case-sensitive which means that Jack Smith is not the same as jack smith. It works by trying to match the second string with the first. **INSTR(a\$,b\$)** will return if b\$ is found in a\$. So if **a\$="Jack Smith"** and **b\$="Smi"**, **INSTR** will return a value, if **b\$="Jack Smith Jr."** - it will return 0, because a\$ does not contain the whole of b\$.

When the match is found we want to display the contents of the cell, that is the six lines containing the address and phone number of the person. The best way around this problem is to write yet another sub, purely for displaying a cell. The sub will come in handy later on, when you may want to write additional subs that enable you to scroll through the address book, edit it, remove entries etc.

Sub show_cell will be passed a single parameter telling it where the search string was found. The sub will then display six lines from



This complex dialogue box is taken from HiSoft BASIC 2 and demonstrates the friendliness of a dialogue box created with a resource construction set.



The shape of things to come... Next month you will see how a resource file can be used to display a dialogue box inside your programs. The address book program is one step closer to being a 'proper' GEM application.

STEP ONE – TO RUN THE PROGRAM IN LOW RESOLUTION

m\$="This program runs in low-res only"

a=FNgetrez

IF a<>0 THEN

PRINT m\$
STOP

END IF

This can be written more efficiently –

IF FNgetrez<>0 THEN...

'read resolution into a
'if a is not equal to 0
'print message
'and stop the program

HISOFT BASIC

the **book\$()**. Sub **find** should be:

```
SUB find
SHARED book$(),lines
STATIC i,srch$
INPUT
  "Enter search string";srch$
  'user enters name to find

FOR i=0 to lines STEP 6
IF INSTR(book$(i),srch$) THEN
  'if found then
  show_cell i
  'show the
  cell starting at i
EXIT SUB 'then exit
  the search
END IF
NEXT i
END SUB
```

Sub **show_cell** is quite simple, it uses the parameter passed to it as the start point to display six lines from the **book\$()**. See step three.

INFO

Another simple but useful routine can easily be added to the program. The sub will display some information about the book in an alert box. Sub **info** will need to divide the number of lines by six to find the total number of cells in the book. BASIC supports a special kind of

NEW COMMANDS

FEXISTS(filename\$) - This is a function that returns if the file specified was found. Use this function before attempting to **OPEN** a file in case it does not exist.

INSTR(a\$,b\$) - A function that returns if **b\$** is found in **a\$**. The value returned indicates the position of **b\$** in **a\$**. This value is not required in the address book and is ignored.

STR\$(value) - This function converts a numeric variable to a string variable. This is needed when using **v_text** or **alerts** to display numbers. When using **PRINT** this is done for you by BASIC.

FNform_alert(def,a\$) - Displays an AES alert box containing the message **a\$** and with the default button as specified in **def**. The format of **a\$** should be - [icon][text line] text line 2][button 1|button 2]. Icon may be a value between 0 and 3. You may have from one to five text lines and from one to three buttons. A badly structured alert will normally crash your program.

STEP 2

```
DEFINT a-z
LIBRARY "gemaes" 'needed for alerts

DIM book$(599) 'main text array

CALL load_book 'first load address file

DO 'wait for user choice
  user$=INKEY$
  SELECT CASE user$
    CASE=="N"
      CALL new_name
    CASE=="F"
      CALL find
    CASE=="S"
      CALL save_book
    CASE=="Q"
      CALL quit
  END SELECT
LOOP

SUB load_book
SHARED book$(),lines
STATIC i
IF FEXISTS("BOOK.DAT") THEN
  OPEN "BOOK.DAT" FOR OUTPUT AS #1
  DO
    LINE INPUT #1,book$(i)
    INCR i
    'scroll through the array
    'until end of file
  LOOP UNTIL EOF(1)
  CLOSE #1
  lines=i-1
  'store number of text lines
  'if not found let the
  'user know about it
ELSE
  PRINT "ADDRESS BOOK NOT FOUND"
END IF
END SUB

SUB save_book
SHARED book$(),lines
STATIC i
PRINT "SAVING BOOK.DAT"
OPEN "BOOK.DAT" FOR INPUT AS #1
FOR i=0 to lines
  PRINT #1,book$(i)
NEXT i
CLOSE #1
END SUB

SUB new_name
SHARED book$(),lines
LOCAL tmp$(5)
STATIC i
PRINT "NEW ENTRY"
PRINT "===== "
LINE INPUT "Name: ";tmp$(0)
LINE INPUT "Street: ";tmp$(1)
LINE INPUT "Town: ";tmp$(2)
LINE INPUT "County: ";tmp$(3)
LINE INPUT "Post Code: ";tmp$(4)
LINE INPUT "Tel: ";tmp$(5)
IF tmp$(0)="" THEN EXIT SUB
FOR i=0 to 5
  book$(i+lines)=tmp$(i)
NEXT i
lines=lines+6
PRINT "NEW NAME STORED"
BEEP
END SUB
```

Contd on next page

Contd from previous page

```
SUB find
END SUB
```

```
SUB quit
STATIC a$,button
a$="[2][ Save address book | before quitting ][Save|Quit|Cancel]"
button=FNform_alert(1,a$)
SELECT CASE button
CASE=1
CALL save_book
SYSTEM
CASE=2
SYSTEM
END SELECT
END SUB
```

*'if save was selected, call save_book
'then quit*

'just quit

STEP THREE

```
SUB show_cell(start)
SHARED book$( )
STATIC i
FOR i=0 TO 5
PRINT book$(start+i)
NEXT i
END SUB
```

'start is the passed parameter

'print the six lines

division called integer division. This always produces a whole number and discards the fraction part of the result. The backslash '\' (found between the 'Z' and Shift keys on the UK keyboard) is used for this operation. You also need to add the option to call the sub from the main loop – see step four.

IFS, BUTS AND FUNCTIONS

You may have noticed by now that IF structures and functions work quite well together. INSTR(a\$, b\$), for example, returns 0 if it fails to find the required string, but a value when it does.

The value is the position of the search string within a\$. If a\$="ABCDEFGF" and b\$="CDE", INSTR will return 3, indicating that b\$ was found starting at the third character of a\$. In our program we are not interested in this value – we simply want to know whether the string was found or not and so we use the line – IF INSTR>0 THEN...

In fact, the inequality expression is not required – instead we can use a simpler version – IF INSTR THEN... – which does the same job. This also works with FEEXIST() and many other functions. The idea is that if the return value is not equal to 0, the THEN... statement will be executed. In other words, whenever you use the expression IF A<>0 THEN... you can replace it with IF a THEN...

As you can see, this shortcut also works with variables and in many cases you can make your program more readable.

Additionally you can PRINT the return value of a function by using it like a variable. PRINT FNgetrez, for example, will display the current resolution value to screen.

In a similar way you can PRINT the exit button number of an alert box – PRINT FNform_alert(1,a\$). Printing the return values of functions can be useful when debugging your programs. A full-

NEXT MONTH

Next month we will see how a cell can be removed or edited and will also be taking the first steps into using a resource file to produce 'proper' dialogue boxes. The final program will not display text in a window but in a specially designed dialogue box. Finally the program will be modified so it can run as an accessory.

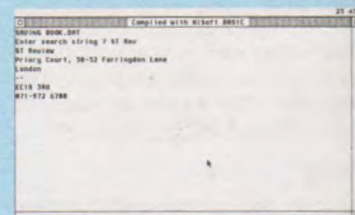
blown program may use many functions and act upon the return values. If the program doesn't do what it is supposed or simply crashes, you can start locating the problem by printing to screen all important functions, results and variables. If you own a printer you could use LPRINT which behaves exactly like PRINT but diverts the output to the printer. You may find that a particular value is not what you expected it to be.



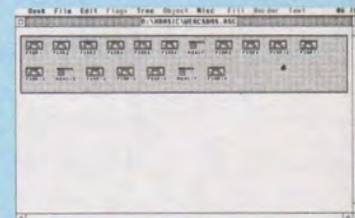
The buttons in an alert are numbered from left to right. The default button has a thicker border.

1 2 3

The alert box is a hidden loop which waits for the user to press a button. The button number is returned as a result of FNform_alert, the default button has a thicker border and can be selected by the user by pressing the 'Return' key. When defining the text and buttons, care should be taken not to exceed 30 characters per text line and 20 characters per button. A maximum of five lines of text and three buttons is imposed by the AES on alerts. A resource construction set is required if you need more complex dialogue boxes.



As you can see from the above, even a small part of the name is enough for INSTR to find the correct name – you do not have to type in the full name when using the find routine.



WERCS by HiSoft is a fully fledged resource construction set program. The Atari "Introduction to Programming" package includes WERCS as well as many other programming utilities at £19.95.

STEP FOUR

```
CASE=="I"
CALL info
```

And the sub itself:

```
SUB info
SHARED lines
STATIC dum,a$,total$
total$=STR$(lines\6)
```

```
a$="[1][ There are "+total$+" | cells in the | address book ][OK]"
dum=FNform_alert(1,a$)
```

```
END SUB
```

*'str\$ is used to convert the result
'into a text string*

*'this alert has only one button
'and we are not interested in
'the result*

Family Roots

THE ELITE OF GENEALOGICAL SOFTWARE.

After 3 years of development, Floppyshop are proud to present "Family Roots". The program is designed around a fully functioning integrated workbench which is ideal for both the serious user and beginner alike. The user creates his or her family tree graphically on the screen by linking directly between the individuals. The growing tree structure can be zoomed, scrolled, altered, scanned, printed, manipulated etc.

The powerful database can be viewed instantly at the click of a mouse button. Marriage partner(s), children and parents are all easily and instantly accessible. A built in powerful search function enables fast cross referencing and multiple scanning.

On line help and information are available at all times, you don't have to worry about losing your place, the program remembers it for you. The printing section supports both graphics and text output.

To order your copy of Family Roots, send a cheque or postal order for £24.95 to the address below. UK postage free, please add £1.50 for Europe or £3.00 for the rest of the World. Credit card orders welcome.

A disk with useable demos of Family Roots, Around The World and Professional Virus Killer is available for only £1.00.

Around The World

Floppyshop are pleased to announce the release of their first commercial game. Around The World is an arcade adventure in which you assume the role of Phineas as he negotiates his way through 40 taxing levels of sheer enjoyment and addiction.

During your adventure you will face many dangers and surprises including toxic waste in the Oceans and rock falls in the Jungles. Locate concealed switches to unlock additional caverns and search for keys which will reveal hidden treasures and further your quest. Can you rise to the challenge and survive this epic journey by completing all 40 levels?

The game features a large playing area, devious puzzles, creeping fungus, rock falls, explosions, an original soundtrack, 50 entry high score table, 40 levels of increasing difficulty, over 40 colours on screen and much more!

Around The World was programmed over more than a year by The Pixel Shop, better known for their many Budgie UK titles under the name of The Happening Boiz.

To order your copy of Around The World, send a cheque or postal order for just £9.95 to the address below. UK postage free, please add £1.00 for Europe or £2.00 for the rest of the World. Credit card orders welcome.

A disk with useable demos of Family Roots, Around The World and Professional Virus Killer is available for only £1.00.

2,500+ DISKS OF PUBLIC DOMAIN, SHAREWARE AND LICENSEWARE

After many years supporting the Atari ST, Floppyshop are now the largest stockist of high quality, low cost software in Britain. Our full catalogue is disk based and simple to use. It has a powerful search facility and can output to printer if required. Floppyshop are also distributors of the Budgie UK and Shoestring Licenseware ranges. Budgie produce games, demos and utility software. Shoestring specialise in educational software for young children. Only approved distributors like ourselves are allowed to sell these titles. For a free copy of the catalogue disk, send us a blank disk with a note of your name and address. Alternatively you can send a Cheque or PO for 80p and we'll supply the disk. Please make Cheque or PO (UK currency only) payable to Floppyshop. Major Credit Cards welcome. UK Postage FREE, Overseas Postage to: Europe £1.00 per order, Rest of World 10% of order value (minimum charge £2.00).

Floppyshop, Dept STRev, PO Box 273, Aberdeen, AB9 8SJ

General Office/Technical Queries Tel: (0224) 586208

Credit Card Orders Only Tel: (0224) 312756

NEED SAMPLES ?....

Try our Sample Library

- Get Professional 8-bit Samples for the price of PD
- Compatible with **Quartet, Replay, Replay Pro, Stereo Replay, Sequencer One Plus, TCB Tracker**
- 100's of sounds to choose from : Drum Kits, Instruments, Percussion, Sound Effects, Vocals
- Expanding Sample Library
- Still only £3.50 per disk

SEND £1.50 FOR CATALOGUE

+ SAMPLER DISK

PLEASE SPECIFY SOFTWARE USED

CUBASE A PROBLEM ?....

You need MIDI guru Geoffrey Ryle's

OFFICIAL CUBASE HANDBOOK

- Helpful hints, tips and secrets
- Tutorials and step-by-step instructions
- Written in the USA

Only £22.45 Inclusive
by Cheque or Postal Order

PREMIER MUSIC SERVICES LTD. Dept:STREV

18 Foyle Road, Chandlers Ford,

Eastleigh, Hants.

SO5 3QP.

Tel: 0703 260485.

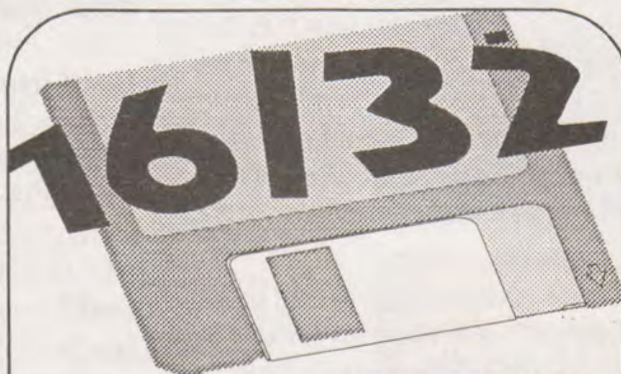
PMS

16/32 are pleased to announce that we have acquired the entire South West Software Library. SWSL were recognised as being one of the major PD/Shareware Librarys in the UK. So if you want a copy of the latest Catalogue on disk from 16/32 plus Latest Updates plus the superlative SWSL Catalogue send £1 to cover P&P to the address below.

START MAGAZINES

16/32 PDL are pleased to announce that we now have a selection of START Magazines complete with disk.

Only £2 each.



Tel: 0634 710788

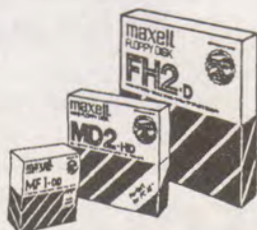
16/32
35 Northcote Road
Strood, Kent,
ME2 2DH

ALL PRICES INC VAT
AND P&P. VISA AND
ACCESS TAKEN

Maxell Disks

PRICE PER BOX OF 10

MD1-DD 5.25" DD	£ 5.80
MD2-DD 5.25 DS/DD	£ 6.00
MD2-DD 5.25" HD	£ 8.36
MF2-DD 3.5" DS/DD 1Mb	£ 6.00
MF2-HD 3.5" HD 2Mb	£12.50



16/32 also supply a large range of Disk Boxes, Mice, and a range of other assorted hardware.

ALL PRICES ARE CORRECT AT TIME OF GOING TO PRESS. E&OE. ALL TRADEMARKS RESPECTED

These are just a sample from our catalogue of high quality vector fonts.

The fonts are available for Calamus, Didot, PageStream, and PostScript for STs, and PostScript and TrueType for Windows.

Phone for a full catalogue.

Special versions of the Calamus fonts are supplied for conversion to bit-image formats such as GDOS and That's Write. The limitations of these formats may lead to non-optimal spacing, particularly with italic faces.

Gate Seven also supply a full range of hardware and software for serious users.

Language The System

Gate Seven specialise in software for the production of documents in multiple languages and scripts, concentrating on Atari and PCs.

Our standard Roman fonts contain the full set of characters included in the ISO standard Latin 1 set, and can be used for a wide variety of Western European languages. Fonts covering all additional European languages and Vietnamese are available at extra cost.

We are particularly proud to be supplying Atari DTP systems for use in Ethiopia. These very definitely provides power without the price in a part of the world where they are much needed.

Bengali, all Cyrillic-based languages, Devanagari, Greek, Gujarati, Punjabi (Gurumukhi), and Tamil are available for Calamus, too.

We have PC-based software for Arabic, Chinese, Farsi, Hebrew Japanese and Urdu.



AGES book *oblique* **demi oblique** £19-95 AGES med *oblique* **bold oblique** £19-95 AGES light *oblique* **ultra oblique** £19-95 AG book *oblique* **bold oblique** £19-95 BEN book **bold** £9-95 BERLIN £7-50 BOOK std *italic* **demi italic** £19-95 CALAMUS **bold** £9-95 CHANCERY *italic* Upright £9-95 CORN Regular *italic* **bold italic** £19-95 DOMINUS std **bold** £9-95 ENGLISH 1 regular *oblique* **bold oblique** £19-95 ENGLISH 2 light *oblique* **ultra oblique** £19-95 EURNARROW regular *oblique* **bold oblique** £19-95 EURNARROW 2 regular *oblique* **ultra oblique** £19-95 EVENWRITER regular *italic* **bold italic** £19-95 EVE regular *italic* **bold italic** £19-95 EVE Open £7-50 FORMAL MEDIUM ITALIC **BOLD ITALIC ULTRA ITALIC** £29-95 FRANKLIN medium *oblique* **demi oblique heavy oblique** £29-95 FRENCH regular *oblique* **bold oblique** £19-95 GERALD regular **bold** £9-95 INTERACTIVE regular *italic* light *italic* **bold italic** £29-95 ITALIAN regular *italic* £9-95 KATIE regular **bold** £9-95 LETTER regular *oblique* **bold oblique** £19-95 LIZ **bold italic** £9-95 LUBAN **bold condensed** £9-95 MEKON regular *oblique* £9-95 MELCHET regular **bold** £9-95 MICHAEL regular *italic* **Bold italic** NEW SCHOOLBOOK regular *italic* **bold italic** £19-95 NEW SWISS regular *italic* light *italic* **ultra italic** £29-95 OLD SCHOOLBOOK regular *italic* **bold** £14-95 OLD LONDON regular *italic* **bold italic** £19-95 OXFORD regular *oblique* **bold obl** £19-95 POPULAR regular *italic* **bold italic** £19-95 POSTER **bold condensed** £9-95 ROYAL regular *italic* **demi italic** £19-95 SKY **demi light bold** £14-95 SUUKOW light medium **bold** £14-95 SWISS CONDENSED 1 regular *oblique* **bold oblique** £19-95 SWISS CONDENSED 2 light *oblique* **black oblique** **SWISS inserrat oblique** £9-95 SWISS NARROW regular *oblique* **bold oblique** £19-95 SWISS 1 regular *oblique* **bold oblique** SWISS 2 light *oblique* **black oblique** £19-95 TIMES regular *italic* **bold italic** £19-95 WARSAW regular *italic* **demi italic heavy italic** £29-95 Albert £7-50 Ancient £7-50 Ascot £7-50 Church £7-50 Clauch £7-50 FANCY dress £7-50 Hotdog £7-50 Monk £7-50 Ramsin £7-50 Varsity £7-50 Sophie £7-50 ARCADIA £7-50 Manuscript £7-50 Roadside £7-50



Gate Seven Computers Ltd

6A Gwendwr Road, London W14 9BG. Tel/Fax 071-602 5186

Prices exclude VAT and include carriage

MIDI MONTHLY

ZOOMING TO THE TOP

Do you want all of those lovely expensive sounding effects like reverb, chorus and echo without paying the price? How about the Zoom 9001 at less than £250?

adaptor which comes as standard. On first sight it looks a little odd as there are no knobs to be seen anywhere, just various buttons for selections and editing.

The sockets on the rear (two for input, two for output) are of the standard 1/4" variety for connection to a mixer, or directly to a microphone, synth or other electronic instrument and a headphone socket is also included for personal use.

EFFECTS

On offer are 20 different effects grouped into eight categories, namely: Studio, Drums, Keyboard, Piano, Acoustic Guitar, Bass, Vocal and Sound, each with their own logo along the top of the display and a finger on-screen which points to the current category. Each category is then broken down into between two and four effects. For instance, Vocal offers Vocal 1, Vocal 2, Harmony and Robot (!). It's possibly a little unfair to categorise effects in this manner, because Vocal 2 might sound great with an acoustic guitar - who knows? Experimentation is the order of the day here.

WORKING WITH THE 9001

All 40 program slots are filled with factory settings, but you can edit any program and save your new effect to any slot. While this overwrites the current program, a facility exists to recall any particular one whenever you wish.

There are 10 banks, each with four programs, so select the bank with the program you wish to edit by using the Up and Down buttons, followed by pressing one of the four numbered buttons for the selection within that bank. Press Edit and you are presented with five editable parameters, each with a small pictorial representation of the value which grows or diminishes as you change it.

AN EXAMPLE

Let's take the example of program #74, Solo Voice, which uses the Vocal 1 effect type. The right and left inputs are mixed together and then passed through three effects modules with the five parameters being shared between these. The first, Enhancer, is used to improve the vocal clarity via the Enhancer Depth setting. The second, Chorus has a Depth setting which changes

ATARI ST
REVIEW
ESSENTIAL BUY



The Zoom 9001 multi-effects processor offers a range of sounds that give excellent value for money.

the intensity, and Mode for mono or stereo. Finally, the reverb module has a Time setting for the size of the hall and Mix which balances the reverb effect with the sound coming into the reverb module. Don't worry too much about understanding how the effect works - just stick a sound in and listen to the difference the various parameters make.

PROOF OF THE PUDDING

The reverbs are great with a smooth, silky result, far belying the price of the 9001; units that cost twice as much are capable of sounding far worse.

Delay time goes up to 1.28 seconds and includes a great ping-pong effect where delays are consecutively bounced between the two outputs.

Chorus is extremely clean and wonderful on a clean guitar sound, but the star has to be the Harmoniser which lets you set two pitch shifts of between an octave above and below. This is very usable for instrument solos or even vocal harmonies.

With the vocal effects, a voice can sound anything from a professional, breathy vocal through to a unison choir in the Albert Hall. Marvellous stuff.

VERDICT

If you want a quality effects processor at a budget price for use in live or recording situations, check out the Zoom 9001 but take your cheque book with you. Once you've heard it perform, you won't want to leave the shop without it!

"A professional sounding effects unit at a budget price"

NAME: ZOOM 9001
COMPANY: MCMCXIX
CONTACT: 081 963 0663

PRICE: £249
RELEASE DATE: OUT NOW
MIN MEMORY: N/A

EASE OF USE	★★★★★
DOCUMENTATION	★★★★★
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★★

OVERALL **92%**

Good selection of effects
Small enough to fit in your pocket
Easy to program
Excellent manual

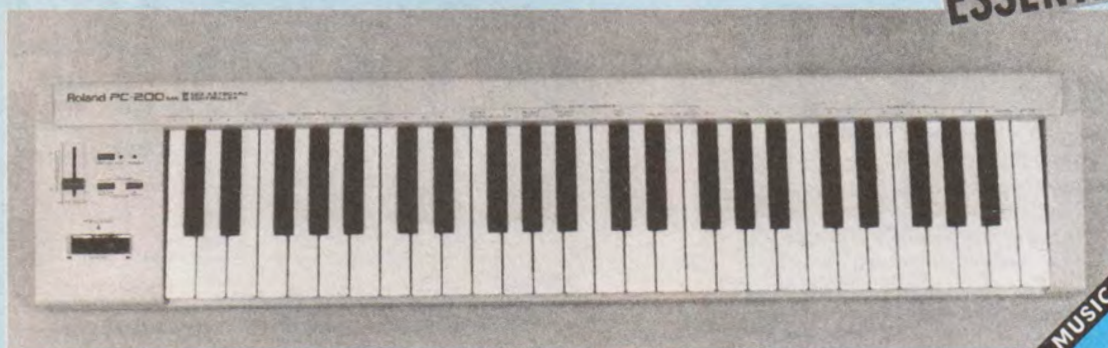
PROS AND CONS

None

PLAYING THE PART

MIDI Monthly has looked at sequencers, samplers, sound modules and drum machines. How about a keyboard? Here's a couple from Roland...

ATARI ST REVIEW
ESSENTIAL BUY



Roland's Boss PC-200 MKII – a great value master keyboard.



The Boss PC-150 is a cheaper alternative, but you couldn't get anything better for the price.

Let's face it – it doesn't matter what else you have in your MIDI system, you're not going to get off the starting block without a keyboard of some sort to play your tunes on!

Bearing this in mind, there are three options that you can consider before you go out and buy one of these singularly useful beasts.

Firstly, you could buy a synth whose sounds you like and then consider adding an expander later to give you a greater choice of timbres when you grow bored of the available sounds.

COST

This is a path that many of you are likely to follow, but most synths with a reasonable MIDI side have a five-octave keyboard and a price to go with it; you certainly shouldn't expect to get much

change out of £800, at least not if you want to get your hands on a decent one.

ALTERNATIVELY...

The second option is to buy a cheap synth with poor sounds, use it purely for its keyboard and buy a separate expander. The problem with going down this path is that most cheap synths of this nature have miniature keys, which are totally unusable from a playing point of view, and a poor MIDI side as well.

IDEAL SOLUTION

The final option is to purchase a master keyboard which has no internal sounds and, again, buy the expander. But a master keyboard is an expensive option, isn't it? Not necessarily; have a look at this pair from Roland...

PC-200MKII

This is the more expensive of the two, but is still reasonably priced at £205. It sports 49 full-sized keys (four octaves) which are touch-sensitive so that the harder you hit

Did you know that EMF, the well-known dance band, use a PC-200 live? Of course you didn't, but you do now! Hands On MIDI Software programmer, Paul Young, also uses a PC-200 to create many of the songs for the Hands On MIDI Song library. You want to hear how good they are? Have a listen to the specially written MIDI File on Cover Disk 2 in the Hands On folder.

the keys, the greater the effect on the level and tone of the sounds that it plays.

While it looks rather cheaply made in its white plastic case, the PC-200mkII has features belying its looks and price. For starters, there's a combined pitch bend wheel and modulation lever.

Moving the wheel sideways changes the pitch of any notes that you're playing, while pushing the wheel upwards activates the modulation lever which usually adds a warbling effect to the sound.

Then there are a couple of switches labelled Octave Up and Down which allow you to play notes beyond the range of the keyboard, effectively giving you six octaves in all!

CUTTING COSTS

One of the price-cutting areas is in the lack of dedicated switches and sliders for all of the various functions. These can be assigned in turn to the slider called Data Entry by pressing the MIDI/Select switch followed by the relevant note on the keyboard, the names of the functions being written above the various keys.

For example, if you want the Data Entry slider to send out MIDI infor-

Good MIDI facilities
Full-sized keys
Cheap for what they offer

PROS AND CONS

Keyboard only covers four octaves
Plastic construction a little fragile

mation to control the level, or volume, of sound from the expander, press the MIDI/Select button followed by the D# key just above the middle of the keyboard. In this way you can control the likes of aftertouch (pressure), stereo pan position and reverb/chorus depth, with the latter being intended for any of Roland's GS synths (one of which, the DS-330, we looked at last month).

Using the MIDI/Select button and different keys, you can set the MIDI channel over which MIDI information is sent and you can also transmit MIDI program and bank change messages via the Numeric Keypad and key labelled Enter to remotely switch between different sounds on the expander.

Battery operated (six AAs are included as standard with the keyboard) with about 30 hours of life, the PC-200mkII is perfect for live use, weighing in at only 2.5 kilograms. For home or studio use,

however, you will probably need to buy the optional Roland power supply unit.

PC-150

Priced at £139, the PC-150 is a cut-down version of its brother, although having said that it still has 49 full-sized keys, but without touch sensitivity.

There is no pitch bend wheel, modulation lever or Data Entry slider - the PC-150 really is simply a bare keyboard.

ADDITIONS

However, some additional settings are available via the keyboard as with the PC-200mkII. On the rear of the PC-150 is a Command button which acts in the same way as the MIDI/Select variant mentioned above and allows you to set the velocity value of the keys, octave up/down, and all of the other functions mentioned for the PC-200mkII.

VERDICT

A PC-200mkII with a Boss DS-330 sound module will cost you less than £550, for which you get a good keyboard and a sound module capable of playing 16 instruments simultaneously. If your budget won't stretch that far, the PC-150 is a reasonable alternative. With your ST and a sequencing program, the musical world is your oyster!

"The PC-200 is a great master keyboard that won't cost the earth - the musical world becomes your oyster with this model"

NAME: BOSS PC-200 MKII
COMPANY: ROLAND UK LTD
CONTACT: 0252 816181

PRICE: £205
RELEASE DATE: OUT NOW
MIN MEMORY: N/A

EASE OF USE ★★★★★
DOCUMENTATION ★★★★★
EFFECTIVENESS ★★★★★
VALUE FOR MONEY ★★★★★

OVERALL **88%**

"Roland's PC-150 is the cheapest master keyboard available anywhere with decent MIDI facilities. Ideal for the home or studio"

NAME: BOSS PC-150
COMPANY: ROLAND UK LTD
CONTACT: 0252 816181

PRICE: £139
RELEASE DATE: OUT NOW
MIN MEMORY: N/A

EASE OF USE ★★★★★
DOCUMENTATION ★★★★★
EFFECTIVENESS ★★★★★
VALUE FOR MONEY ★★★★★

OVERALL **82%**

Cambridge Business Software.

Moat House Business Centre • Melbourn Science Park • Melbourn • Royston • Herts SG8 6EJ

- SOFTWARE
- HARDWARE
- TRAINING

THE
ATARI ST
PEOPLE

ACCOUNTS

Home Accounts 2	£44.90
Cashbook Combo Pack	£59.95
Personal Tax Planner	£34.95
System 3 (Inv/Stock)	£39.95

DATABASES

Data Manager Professional	£29.95
Digita DGBase	£39.95
Prodata	£59.95
Super Base Personal	PHONE
Super Base Professional	Special £89.95

DESKTOP PUBLISHING

Pagestream v2.2	£159.00
Calamus v1.09n	£129.00
Calamus SL	£575.00
Timeworks DTP v2	£89.95
EZ Text Plus	£19.95
EZ Text Professional	£39.95

SPREADSHEETS

LDW PowerSpreadsheet v2	£99.00
K-Spread 4	£95.00
K-Spread 3	£69.95
Digicalc	£29.95
Logistix v1.2	£69.95

ART/GRAPHICS/DESIGN

Degas Elite	£19.95
Hyperdraw	£29.95
Hyperpaint v2	£29.95
Megapaint II v4	£85.00
Megapaint II Professional v4	£199.00
Easy Draw 2	£39.95
Supercharged Easy Draw 2	£59.95
Cyber Studio (CAD 3D v2)	£39.95
Cyber Control	£32.95
Cyber Paint v2	£39.95
Spectrum 512	£24.90
Technobox Drafter v2	£179.95

COMPUTERS/MONITORS/PRINTERS

520STE Start Pack	£249.00
520STE upgraded 1Mb	£259.00
520STE upgraded 2Mb	£285.00
520STE upgraded 4Mb	£359.00
1040STE Family Curriculum II	£299.00
1040STE Music Pack Incl Pro 24	£299.00
Mega STes	From £399.00
TT030	From £890.00
Falcon 030 1MB	PHONE
Falcon 030 4Mb 65HD	PHONE
SM124 Mono Monitor	£129.00
Atari SC1435 Colour	£209.00
Philips CM8833 MkII Monitor	£199.00
Ricoh LP1200 Laser Printer	£795.00

MUSIC

C-LAB Notator	NEW PRODUCTS
C-LAB Creator	EXPECTED
C-LAB Notator Alpha	
C-LAB Unitor II	£129.00
Cubase v3	£395.00
Cubase Lite	£99.00
Replay 16	£99.95
Breakthru Sequencer	PHONE
Concerto	£34.95
Quartet	£39.95
STACEY Laptop 4Mb/40	£795.00

WORD PROCESSORS

Calligrapher Professional	£89.00
Calligrapher Gold	£129.00
GST First Word Plus v3.2	£57.95
Wordwriter	£39.95
Protext v5.5	£109.00
That's Write v1.5	£85.00
That's Write v2	PHONE

proter

Good Hard Drives Cost Less from CBS!

Progate II 20Mb	NOW £219.00
Progate II 40 Mb	NOW £295.00
Progate II 40 Mb DC	NOW £339.00
Progate II 100 Mb DC	NOW £489.00
Progate II 120 Mb	NOW £599.00

PC EMULATORS/TOS 2.06

PC Speed	£99.00
AT Speed 8MHz	£129.00
AT Speed C-16MHz	£199.00
TOS 2.06 Official UK Versions in Stock	

LANGUAGES & COMPILERS

Hisoft Devpac v3	£65.00
Hisoft Basic 2	£65.00
Hisoft C. Interpreter	£42.00
Hisoft Lattice C v5.5	£109.00
Hisoft Nevada Cobol (With CP/M)	£45.00
Hisoft High Speed Pascal	£79.95
FTL Modula 2 Developer	£79.95
GFA Basic Interpreter v3.5	£45.00
GFA Basic Compiler v3.5	£24.90
Prospero Pascal	£79.95
Prospero Fortran	£79.95
Prospero C	£79.95
Prospero Developers Toolkit	£55.95

MISCELLANEOUS

C-Font	£9.95
Neodesk v3	£29.95
Harlekin 2	£44.90
Naksha II Hand Scanner	PHONE
G+Plus	£19.95
SLM804 Replacement Drum	£165.00
SLM605 Replacement Drum	£132.95
SLM804 Replacement Toner	£37.95
SLM605 Replacement Toner	£32.95

0763 262582

FAX 0763 263488

TELEX 817932 CAMTEC-G

WE DESPATCH ANYWHERE WORLDWIDE WEEKLY

IMMEDIATE DESPATCH (subject to availability)

ORDERS WELCOME FROM EDUCATION, GOVT. & BFPO

All prices include VAT & delivery • NO surcharges on European orders

Make cheques payable to Cambridge Business Software

24-HOUR ORDER LINE 0763 263127

VISA

Access

Cambridge Business Software.



*Do you need to use a sequencer live?
Do you want a librarian for your
synth sounds? Do you want a
single device for both of these tasks?
The Yamaha MDF2 might fit the bill...*

LIVE AND RUNNING

I know the sun shines out of your ST's sockets, but let's get real; using one for live work is certainly not a bowl of cherries. An Atari ST is simply not designed to be lugged around from concert to concert and as for monitors...

In a musical sense, there are two main reasons why a computer might be necessary live. The first is to play back songs (for backing purposes) which have been recorded on a sequencer. The second is to load sounds into various different synths.

The latter role is also necessary in the home studio where you have a synth whose sounds you keep

editing but want to easily get back to a previous set. Yamaha's MDF2 (MIDI Data Filer) is the perfect tool for such situations.

ENTER ONE SMALL BLACK BOX

In keeping with the age-old tradition for such units, the MDF2 is a small, black plastic box which hardly looks big enough to take a standard 3.5" disk and six AA batteries which can power it for about four hours (an optional power supply unit is available).

It has a small, one-line display without a back light – a major omission bearing in mind the live applications on a dark stage!

Next to the display are three sets of buttons with the top row being used for mode selection. MDR (MIDI Data Recorder) is used for sound banks, SEQ for MIDI song file recording and playback direct from disk, JOB for various functions including repeats and tempo changes and UTIL for disk operations. Below this are the Record, Pause and Start/Stop buttons while beneath the display are the +/- data buttons and cursor movement keys.

WORKING WITH SONGS

If the MDF2 can play back MIDI song files from your sequencer, do you simply take your song disk and place it in the MDF2's disk drive?

Well, yes and no. As previously mentioned in these pages, there are two frequently used formats for MIDI Files; 0 and 1. The MDF2 will only read format 0 files and most sequencers save MIDI Files in format 1, but you may be able to get around this by merging all tracks together into a single track and then saving. If this is still not a format 0 file, and the MDF2 will tell you in no uncertain terms, then you can connect the MIDI Out of the ST to the MIDI In of the MDF2 and transfer the song in that manner. Songs transferred in this way are always saved as format 0 MIDI Files on the MDF2.

Once you have a disk with various song files on-board, playback is simple. Place the disk in the MDF2's drive, select the song via the +/- keys and press play; the display tells you the performance time as the song plays.

SAVING BANKS OF SOUNDS

Transferring sound data is equally simple. Having connected the MIDI Out from the synth to the MIDI In of the MDF2, press the MDR button and select the next empty file on the disk. Hit Record and Start/Stop and start sending the data from the synth; there's a function on most synths to instigate such a data transfer.

Sending data to a synth is simply the reverse operation in terms of MIDI connections. Select a file and press play. That's it!

OTHER FUNCTIONS

Yamaha has always used the term 'JOB' to describe a whole host of functions and the MDF2 is no exception. JOBs include setting up play repeats for songs, putting together a chain of songs for playback, changing the tempo, or playback speed, of a song and forcing the MDF2 to play in time with another sequencer or even another drum machine.

The disk utilities available include the obvious Delete and Rename functions along with Append to join files together, Backup of a disk (a lengthy affair as the MDF2 can

only handle 20 Kbytes of data at a time) and Disk Format. Additionally, you can get information on how much space is free on a disk and the number of files.

Very portable
Plays MIDI Files created
on your ST sequencing
program
Saves lots of banks of
sounds on a single
3.5" disk

PROS AND CONS

No backlight on
the display

*"As a librarian, the
MDF2 is good. As
a live song file
playback device,
it's invaluable"*

NAME: YAMAHA MDF2
COMPANY: YAMAHA
KEMBLE MUSIC (UK) LTD
CONTACT: 0908 366700

PRICE: £249
RELEASE DATE: OUT NOW
MIN MEMORY: N/A

EASE OF USE	★★★★★
DOCUMENTATION	★★★★★
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★★

OVERALL **85%**

VERDICT

In the studio the MDF2 is, perhaps, of limited use if you already have an ST and a sequencer as most programs allow you to save sound data on a track.

However, for live work the MDF2 is a very useful tool. Up to 112 files can be stored per disk, including up to 99 sequence files, depending on file sizes. A typical figure would be 20 or 30 which is enough to have an entire set of songs without the hassle of waiting for each of them to load.

INSIDE INFO

MIDI FILES

Standard MIDI Files, to give them their full name, are intended to allow you to save songs on one sequencer and load them into another, even on a different computer – although this depends on whether a different computer can read the disk format.

There are three different formats. Format 0 is for a single track which can be used if you have recorded, say, a single piano backing accompaniment. Format 1 is for multiple tracks which is the case with most sequencers on the ST where your song has lots of different instruments. Format 2 is for multiple patterns, but this format has very rarely been used.

Don't worry too much about the file formats. If you have only recorded a single track, the sequencer will probably record it as a format 0 file while the use of lots of tracks will require a format 1 file. If you have to force a sequencer to save as a format 0, for instance for the MDF2, merge all tracks down to a single track and then save the song.

BUILDING A MIDI SYSTEM

What happens if you want to use a sequencer and sound module with two keyboards? Time for a merger...



In issue seven, we looked at using a MIDI Switcher, a cheap device which allows you to select one of various inputs to be switched to the output. This is useful if you have various different keyboards but only want to play one at a time. But what happens if you want to play two at the same time?

You may, for example, want to share a multi-timbral sound module with a friend, each of you using a different keyboard and playing individual sounds. One of you might be playing a bass line while the other plays a piano part, each keyboard transmitting MIDI information on a different MIDI channel.

As this requires the MIDI information to be mixed together, an intelligent unit is needed to make

certain that the MIDI data making up a particular message is kept together. For instance, there are three elements to a Note On message and these must not be split up, otherwise the Note On message will be incorrectly transferred and the note won't play. The unit which can carry out such a task is called a MIDI Merger and as it has a micro-processor on-board, it costs more than a Thru box or a MIDI Switcher - around £80 for a two into one merger (figure 1).

The simplest use for a Merger is with two musicians sharing an expander (figure 2). One synth might be transmitting on MIDI channel 1 while the other might use MIDI channel 2. In this way,

Figure three: using a pair of synths with a sequencer allows you to record a joint performance.

each of them can be playing a different sound on the expander.

The MIDI Out from each synth is connected to one of the MIDI Ins of the Merger while the MIDI Out of the Merger goes to the MIDI In of the expander.

Perhaps a little more interesting is the idea of recording a joint performance on a sequencer. There is nothing like playing along with another musician to give you musical inspiration and to get that feel which no amount of playing to a pre-recorded track can deliver. For this, the two synths are again connected to the Merger, but the output of the Merger now goes to the MIDI In of the ST whose MIDI Out connects to the MIDI In of the expander (figure 3). The soft-Thru facility of the sequencer must be turned on, but don't channelise the MIDI input or else both synths will end up playing the same sound.

There are various MIDI Mergers available, but the Philip Rees 2M at £79.95 is a particularly good one. It's mains powered and reliable;

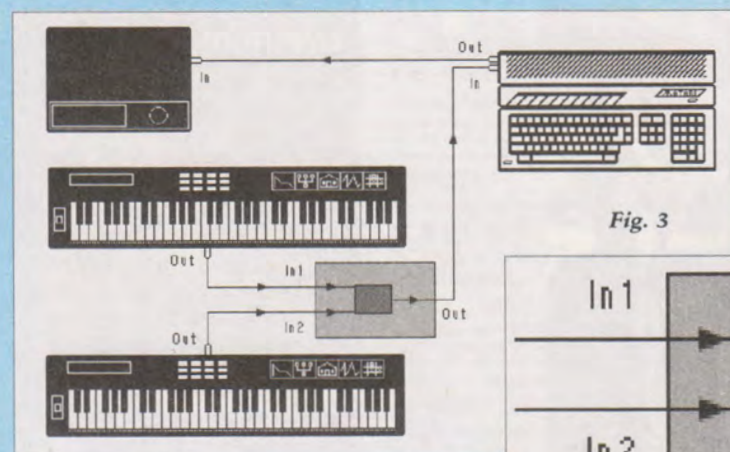


Fig. 3

Figure one: a two-way MIDI Merger combines together the MIDI messages appearing at the inputs and then transmits them from its output.

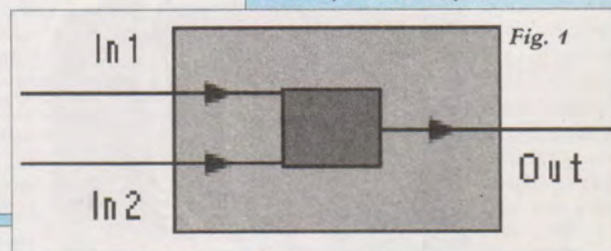


Fig. 1

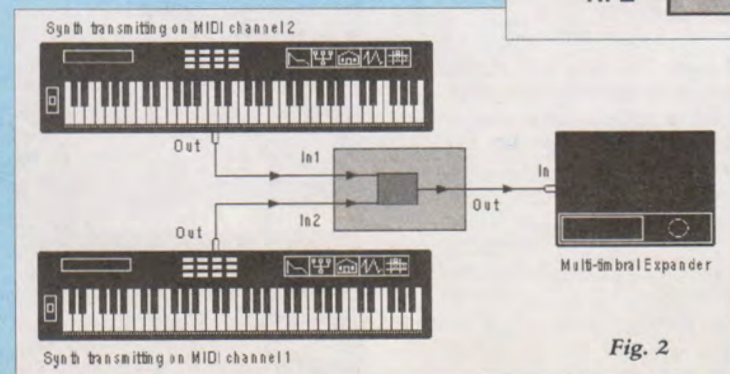


Fig. 2

Figure two: two synths transmitting on different MIDI channels can play different sounds on a multi-timbral expander at the same time.

more information from Philip Rees on 0608 811215.

Whatever you do, don't try to splice together two MIDI leads in the way that you might do with audio cables. Due to the way that MIDI signals are transmitted, such an idea will not work and could damage equipment.

Remember that MIDI stands for the Musical Instrument **D**igital Interface which means that you can't take the kind of liberties that you might normally with standard analogue audio signals.

WHAT IS A SAMPLER?

While not strictly a MIDI instrument, a sampler has a wide list of uses, from creating backbeats for dance music to playing solo violin!

A sampler is a bit like a tape recorder in that it records sound but rather than use tape, it converts the sound into a digital form and stores it in its memory. Once sound is stored in the sampler's memory, it can be altered in various ways, so it's not purely a playback device.

A sampler makes a recording in much the same way as a tape recorder, via a microphone or an audio input. Care has to be taken in the same way with a sampler as with a tape recording. The correct levels are essential: without them too much background noise (known as under recording) or distortion (over recording) occurs.

Once a recording has been made, the sample can be played back by allocating it to a note on a connected MIDI keyboard. If the key you press is higher than the one for which the sample was recorded, the sample will play back faster and so will be higher in pitch but shorter in length. Playback via a lower key has the opposite effect; slower playback, lower in pitch and longer in length. The character of the sound also changes; playback via lower keys invariably makes the sound appear dull.

To get around this, a technique called multi-sampling is used. This requires you to record the original sound several times at different places on the keyboard and then set a range of keys for each of the

samples. The result is capable of bearing a high fidelity to the original sound, although multi-sampling invariably requires more memory than using a single sample.

Let's say that you've taken a sample from a violin for three seconds. To get the aural illusion of it playing longer than that you use a technique called looping, where a portion of the sample is selected to repeat over and over again.

With a violin, this will probably be the part where the player is using vibrato because the repetitive nature of this is easy to loop. With a drum beat sample, it will be the entire phrase. Most dance music is based on a looped sample in this way.

Most samplers have a disk drive to allow you to save samples onto disk. Some of the more expensive ones have either an internal hard drive or a SCSI (Small Computer

System Interface) port for connection to an external hard drive.

As a final point, you should remember that you never get anything for nothing. For quality sampling, you need to use a high sampling rate - 30 kHz and above. However, a higher sampling rate means more data and so requires more memory.

The same can be said about the resolution of the sampler; the higher the number of bits, the better the quality of sample, but the higher the memory requirement.



MODEST MIDI

Just the place to explain all those terms that we take for granted. This month it's a look at all of those terms used in sampling...

LOOPING:

Technique used to give the aural illusion of continuous sound from a short sample. Start and End points set a segment which plays continuously.

MULTI-SAMPLING:

This is a technique where several different versions of a sound are recorded at different places across the keyboard.

RESOLUTION:

The number of steps into which the amplitude is divided. Eight bits means that 28 steps are available, a total of 256 values. However, 16-bits means that 216 steps are used, a total of 65,536 steps which is why 16-bit samplers are more expensive than 8-bit ones as they can reproduce the recorded sound more accurately.

SAMPLER:

Device capable of recording analogue audio signal and converting it to a digital format for storage and editing.

SAMPLING RATE:

This term refers to the number of times per second that the input is sampled. For instance, CD quality means 44,100 samples per second (44.1 kHz) while seedy quality usually means something less than 20 kHz!

TRUNCATING:

Lopping off bits of samples that aren't needed to free up memory space. For instance, you might start recording a little too early and just have unwanted noise at the start of a sample. Getting rid of it is known as truncating.

AMPLITUDE:

The difference between the highest and lowest values of a recorded signal.

BANDWIDTH:

Due to the nature of digitising sound, the sampling rate has to be reduced by at least half to give the audio bandwidth that we hear. CD quality (44.1 kHz sampling rate) gives an audio range of around 20 kHz.

CROSS-FADING:

Method used to move smoothly from one sample to another, usually according to the velocity of an incoming MIDI note. For instance, a soft piano sound might move towards a brighter sample as the velocity increases, much as a real piano. The payoff? More memory required!

CROSS-SWITCHING:

Changing from one sample to another according to the velocity of the MIDI note. A typical example is slap bass where a high velocity gives the slap sound while a low velocity gives the normal, sustained bass sound.

SOCCER SUPREMO

The ultimate challenge in soccer management is to take a ragbag of good club players and mould them into an efficient, organised squad that will take the rest of the world apart in the World Cup Finals. Why not join Michel Platini, Johan Cruyff and Franz Beckenbauer in the USA in 94?

Soccer Supremo puts you in charge of a European national squad preparing for the European Nations Cup qualifiers. You have an initial four year contract that may be extended to six or eight years, or reduced to two, as the results dictate. You'll be expected to qualify for the Finals, then put up a show against the best European teams. but this is just preparation for the big one: The World Cup!

Customisation. The game will allow you to take the European nation of your choice and you will be allocated an initial squad of 16 players. You can introduce a further 34 players, making 50 in all, whose names and skills (but not levels) You can define yourself. These players are introduced gradually as you discover the weaknesses in your squad and also to create the balance of skills that match your style of play. The original 16 players can be defined in the same way using the EDIT program (free with the game) if you wish as well as the teams that will make up the opposition.

With Soccer Supremo the soccer management game comes of age with a match display that not only gives considerable information about the performance of players and team, not only allows the major tactical changes the state of the game demands, but is also entertaining and even exciting. The childish number juggling game has been replaced by an intelligent select-the-team and watch-the-match simulation. Oh.....yes.. Italy equalised but England won on penalties.....

Continuous display of:

SUBSTITUTIONS
POSITIONAL CHANGES
OVERALL WORKRATE
IND. PLAYER WORKRATE



HEAD COACH

V3

"From my point of view, the game has kept me sitting up at nights through holidays and weekends for up to 12 hours at a stretch, with miniscule breaks for food and other necessities.....It is a game I have no hesitation in recommending to anyone with even the slightest interest in American Football"

ATARI USER

ATARI USER

Headcoach V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team. Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your game play to beat the very best the NFL can throw at you.

56 Screens of stats are available to help you to judge your players and team performances.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild...

THE MIDNIGHT OIL

Tel Sales:
0438 721936



FOR

**NEXT DAY
DELIVERY**



POSTAL SALES

The Midnight Oil
Dept STR
18, Hazelmere Road,
Stevenage SG2 8RX
2/3 days delivery

Please supply:

	HC	DIV1	SS
ST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	£19.95	£19.95	£19.95

Head Coach works with ALL
STs/monitors
SS and DIV 1 require colour
monitor/TV.

[illegible]

**The message is
clear in any
language -
Calligrapher
version 3, a
generation ahead
of other
wordprocessors.**

Copies of Calligrapher registered after November 20th 1992 that are not version 3, will be upgraded automatically. Previously registered customers will receive details of upgrades directly.

The screen shot shows Calligrapher Gold version 3, running under MultiGem, with the interactive formulae editor displayed in the centre of the screen.

A brochure on both Calligrapher Professional and Calligrapher Gold is available from WorkingTitle, PO Box 4, Eynsham, Witney, Oxon, OX8 1UD. Tel 0865 88 35 92.

IMPORTANT ANNOUNCEMENT

The latest edition of the Goodman International Shareware Guide is now available.

Over 150 pages, with screen shots and descriptions for hundreds of disks of the very best in ST & STE Public Domain and Shareware.



Discover why thousands of ST users, worldwide, have, for over six years chosen Goodman's for all their public domain and Shareware needs.

- New Loose Leaf Format For Easy Updating
- Divided Into 10 Main Reference Sections
- Complete With Card Index Dividers
- Subscription Available For Updates & Amendments
- Includes the Official STOS Source Code Selection

Send for your copy today

Only
£2.95

Inclusive of UK Carriage



Goodman International (DEPT STR)
16 Conrad Close, Meir Hay Estate, Longton,
Stoke-on-Trent. ST3 1SW.

TEL: 0782 335650 FAX: 0782 316132



POWER TO SEE THE PROBLEM..... AND SUPPLY THE SOLUTION.....

ACS Electronics is an established service centre for ATARI equipment. We specialise only in the repair and maintenance of computer hardware. Dedicated to a programme of quality customer care, our continual expansion enables us to offer you, our customer, a service that we believe to be second to none. Our service includes:

FAST EFFICIENT SERVICE.
most repairs are carried out within ONE DAY

QUOTATIONS RATHER THAN FIXED PRICES,
faster to you and in practice faster to process. Each repair is quoted for separately, no fixed charges full of exclusions, or hidden extras.

REPAIRS FROM £23

FREE CARRIER SERVICE with insurance,
FREE diagnostic inspection, free 90 day warranty, FREE soak test,
FREE software,
No hidden charges.

OPTIONAL EXTENDED WARRANTY
at competitive rates.

Experienced and qualified engineering and support staff.

5% DISCOUNT
available to students and OAP's.

UNBELIEVABLE UPGRADE FITTED PRICE OF £15 INCLUSIVE
Trade and Education welcome. Dealer pack available on request.



COMPUTER MAINTENANCE, UPGRADES AND REPAIRS
R.E.C. ELDON STREET, SOUTH SHIELDS, TYNE & WEAR, NE33 5JE
TEL..(091) 455 4300 FAX..(091) 455 1847

Software

Multiprint £9.95
Intelligent printer buffer with option to save output to file for rapid multiple copies. ST Format Gold Award utility.

Mouse Tricks 2 £6.95
More than a mouse accelerator. Mouse Tricks offers a massive choice of settings for maximising the productivity of your rodent.

Fontkit Plus 4 £24.95
Latest version of the ultimate font utility for the Atari ST/TT. Full details of new features available on request.

Books

Your Second Manual to the Atari ST
A Users' Guide to
Timeworks Publisher
A Users' Guide to
First Word
The Atari
A to Z

Over 300 disks of
Printed Clip Art
Catalogues.
From 85p per disk!

3.5" Disks

Top quality disks at
bargain prices.
10 @ £5 - 25 @ £22.50
Includes labels and 1st class delivery

Redacteur Junior - £39!

An amazing wordprocessor at an incredible price.
Write/phone for full details and demo disks.

WARP 9

Formerly Quick ST, this is the latest and greatest software screen accelerator for the ST/TT: graphics and text look the same, but appear with astonishing speed. Includes a host of utilities from CodeHead Software: mouse accelerator, desktop pictures, new system fonts, keyboard control over dialogs, and an excellent After-Dark-alike modular screen saver. Price: £24.95, upgrades from other screen accelerators (return manual cover): £12.95.

Imagecopy

Copy images from screen, view and convert images, and print images on a wide range of printers, including: 9-pin, 24-pin, BJ Bubblejet, and HP Laserjet and Deskjet. Price: £9.95.
--- Coming Soon: **Imagecopy Colour** with support for most colour printers.

The ST Club

64
page

Catalogue out now

PD and Shareware disks, ST Club Software, Cables, Books, Blank Disks, Clip Art cat's, ST Applications magazines, etc.

FREE Phone: 0602-410241
FAX: 0602-241515

The ST Club, 2 Broadway,
Nottingham, NG1 1PS
Write:



BUDGIE U.K. LICENCEWARE IS ONLY AVAILABLE FROM WELL ESTABLISHED AND LICENCED DISTRIBUTORS. BUDGIE PRIDE THEMSELVES ON THE FACT THAT MUCH OF THEIR SOFTWARE EQUALS COMMERCIAL QUALITY SOFTWARE AT A FRACTION OF THE PRICE.

BUDGIE COMPILATIONS £3.95 each

COM 02 Ace Invaders/Zenith/Tri Heli/Cosmos
COM 03 Football 88/Parabellum
COM 05 Dr Boris/Puzzler/Pro Darts/Maelstrom
COM 06 Diamond/Speculator/Othello
COM 07 Ball Zone/Money Spinner
COM 08 Exodus/Bounty Hunter
COM 09 Bandit/Sleazy Sid/Space Blob
COM 10 Operation Angelica/Psycotic/Galaxia
COM 12 Inferno/Runaway/Tabiti
COM 13 Impulse/Scary
COM 17 Onyx/Hostile Reception
COM 18 Dizzy Lizzzy/Mission Dead Zone
COM 19 Death Camp/The Village
COM 21 Black Scar Mountain/Shards of Time
COM 22 Perplexia/Extremis/Space Duel
COM 23 Overlord/Chiroplast/Hell/Zyklop
COM 25 Football Genius/Super League Soccer
COM 26 Missile Alert/Colony/Spaced Weller

NEW BUDGIE GAMES £2.95 each
BU 101 PHANTOM ZONE by Prime Time
BU 102 ESCAPEDE by Kathy Steinbach
BU 103 ATTITUDES by Mike Duncan (D/S)
BU 104 JETPACK by Pete Whitby
BU 105 DOMINONES by Gary Wheaton
BU 106 HEADLONG by Gary Wheaton
BU 107 PLATFORM CAPERS by Kay Downes

NEW BUDGIE UK productivity disks £3.95 each
PRO 26 EARLY LEARNING MATHS 1
PRO 27 EARLY LEARNING MATHS 2
PRO 28 UTILS 1



Just send blank disk and S.A.E. for Catalogue or £1
CATALOGUE FREE WITH ALL ORDERS OVER £5
CHEQUES & P.O.s PAYABLE TO: PD.ST

PD.ST, Dept. STR, 95 ELTON ROAD, SANDBACH, CHESHIRE CW11 9NF
Telephone: (0270) 762520 (24hrs)

BIG VALUE PACKS Take any two packs for £14! or three for £20!!

TRACKER PACK

Noise Tracker • 193 Sampled
Voices • Sixteen Mod Samples
£8.00

ADVENTURE PACK 2

Empire Builder • Invasion •
Wizards Tower •
Darkness is Forever
Tombs of Death • Nethack the
Adventure • Don't Bank on it •
Assassin
FMC Trading • Battle for the
Throne • Tank
£8.00

GAMES PACK 2

Robotz • Tennis • EB City • Crib •
Liamstron • Spaceballer
Blaster • Megaroids • Quicksdraw •
Time Bandit
Hotshot • Motorbike • Sensori •
Snake • Stocks • ST Vegas
Empire Builder • Floyd the Droid
ST Invaders • Hero • Once A King
£9.00

GAMES PACK 4

ATC • Bridge It • Chess • Decoder
• Fruit • Jumpster • Trivia • Devast •
Dominoes • Laserball • Nova •
Orca Keep • Strip Pontoon • Spell
Breaker • 8 pins • Life • Line up 4 •
Panic • Patience • System 5 •
Trifide • Bubble • Chequers • Soli •
Collous Caves • Jiggers • Money •
Quiz • Reversi •
£8.00

CLIP ART PACK 1

Hundreds of images stored in
PC1 format
£8.00

ADVENTURE PACK 1

Eaglesar • Elven Crystals I & II •
Hack • Once A King
Dudley Dilemma • EB City • Under
Berkwood • Dark Peril • Hero
£8.00

GAMES PACK 1

Bingo • Milegame • Poker •
Quickdraw • Rubiks Clock
Stocks & Bonds • Super Sim •
Trivia • Hanoi • Invert • Droid
Tetriside • Tile • VSQ •
Mastermind
£8.00

GAMES PACK 3

Monkeys & Balloons • Racecard •
Reflex • Spectral Sorcery
Revenge of the Mutant Camels •
Snowball Fight • Pacman •
Royal • Gilbert • Masterbreakout •
Mountain • Ozone • Strip Breakout
Atoms • Violence • International
Criket
£8.00

UTILITY PACK 1

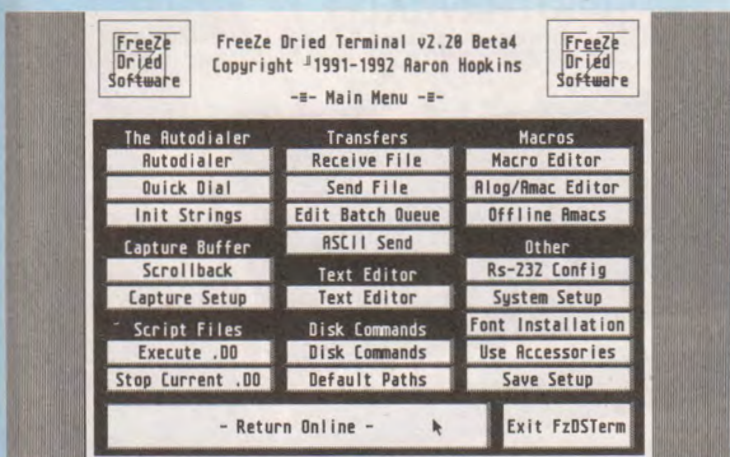
Double Sentry • DB Master •
F/Copy III • ST Writer • Clock Set •
EZ Art
Little Green File Selector • New
Word • ST Tools
Showmen • ST Fix • V Killer • Util
Copy • Format • ANIST
Boot Sector Installer • Boot Wait •
Boot Drive • BSSS
B Install • Custom • Data 2 • Disk
Cat • Revenge • Flitit
Goacc 2 • Libs • PC Trace • Sam
Com • Scan 4 Pic • S Gem 1-4
£8.00

UTILITY PACK 2

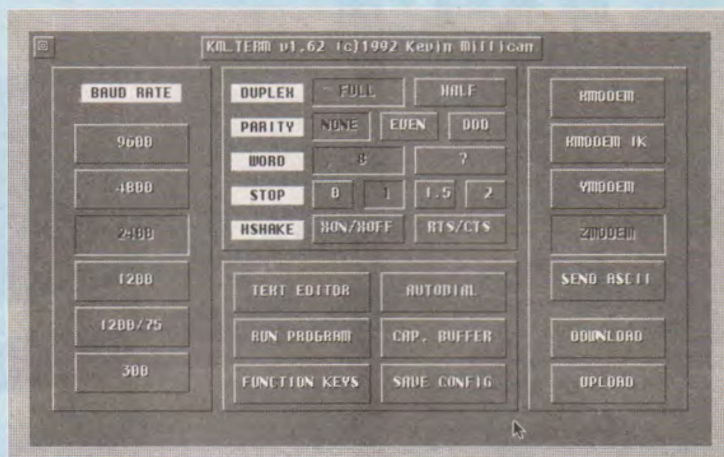
Antidote • Supercard •
Weedtor • Awesome • Pack Joe
• Multi VI
Ram Disk • Fastcopy III • Diary
• Spreadsheet • Typing Tutor
ST Graph • Genlock • Crack Art
(1 meg) • Flicker Animation •
Van Gogh
Pic Switch • Pic Snap • Picture
Hunter • Paser • Mono Emulator
Desktop • Mouse • Degas Neo •
Convert • Blaster • Bit IMG • Art
Conv £8.00

EASY TERMS

Mark Baines looks at the latest alternative to Freeze Dried Terminal



The Freeze-Dried main control panel.



The KM-Term control panel – simple and clear.

The excellent **Freeze-Dried Terminal** program is quickly becoming the *de facto* comms terminal program, much like **Uniterm** was a few years ago. However, for new users it is hard to set up (especially if you unknowingly obtain a copy that has been preset for the Canadian/US telephone system), it can be complicated to use and the poor documentation assumes far too much of the user.

Kevin Millican wasn't happy with **FzDT**. The mono display was poor, the obscure text editor couldn't compete with **Tempus2** and the control panels were too complex. The simple elegance of **DTerm** and **Uniterm** had gone. The answer for Kevin was to write his own, and **KM-Term** is the result.

PLAIN ENGLISH

KM-Term presents a friendlier interface for the user with the help screen and control panel just a key press or click away. External programs can be called from within **KM-Term**. Indeed, Kevin sees **KM-Term** as a shell for linking your text editor, file transfer protocols, QWK off-line readers, archivers and other utilities together. In this respect, **KM-Term** does provide that freedom, it works well and has been stable except under **OverScan**. It doesn't, however, work under **MultitOS**.

INNOVATION

One of the most innovative features is the **HOST** mode, which is obtained by pressing the Insert key. This sets up **KM-Term** so that someone else can ring in and connect to you as if you were a BBS. A menu system, text files and bulletins can be made available to the

remote user who can chat with you, and using **Jekyll**, upload and download messages and files – even if you aren't there. That feature alone will keep **KM-Term** on my hard disk.

The configuration file can be directly edited, although most items are set from within the program. The AutoLogon feature allows for more scope than that of **FzDT** and much of **KM-Term**'s versatility and control revolves around AutoLogon files. However, their use doesn't replace the power of a proper script language.

The lack of automatic redialling of a phone number is very frustrating and accessories are not available.

There is no prompt to save the capture buffer when you quit which can be a disaster. However, I'm sure that such problems will be solved soon.

The shareware registration fee is £5. £10 will get you the excellent printed manual, utilities (**XYZ**, **Jekyll**, **PROED** editor etc.) and Power BASIC source code which the user can alter and recompile for their own use. This is a generous and creative idea.

KM-Term is the easiest terminal program to set up and use that I've seen. If you can't cope with **Freeze-Dried**'s control panels and lack of documentation, can't configure **Uniterm**'s pop-up menu or just dislike **DTerm**, then give **KM-Term** a run for its money.

KM_TERM V1.63 SPECIFICATIONS

- Medium or High resolution
- Full VT52 emulation
- Partial VT100 & ANSI emulations in colour and monochrome
- Resizable capture buffer
- Direct support for XYZModem and JEKYL
- User-defined editor
- Predefined program run slots for frequently-used programs, e.g. ARCSHELL, Off-Line Reader, Binkley, etc.
- Eight macro keys (F1 - F8)
- 10 quick auto-dial slots
- Auto-dial and hang-up for Hayes compatible modems (or others)
- Direct support for Mercury
- Buffered V23 to avoid loss of returned characters
- Pseudo-GEM front end control panel
- Upload ASCII text file directly into most BBS line editors
- Help menu includes current call duration and charge
- Call logging with call charges on BT and Mercury
- Three high resolution fonts for the VT100/ANSI emulations
- Simple to use AUTOLOGON facility which allows you to include XYZModem transfers in autologon files with individual setups for different boards
- Automatic HOST (mini-BBS) mode



The handy KM-Term help screen can be called up at any time.

AVAILABILITY

To get a copy of **KM-Term**, contact Kevin Millican, 20 St Johns Road, Belton, Great Yarmouth, Norfolk, NR31 9NS

"A valuable and easy-to-use alternative to FzDT"

NAME: KM-TERM

STATUS: SHAREWARE

CONTACT: ANY PD LIBRARY

PRICE: LEVEL 1 £5.

LEVEL 2 £10

RELEASE DATE: OUT NOW

MIN MEMORY: N/A

EASE OF USE ★★★★★

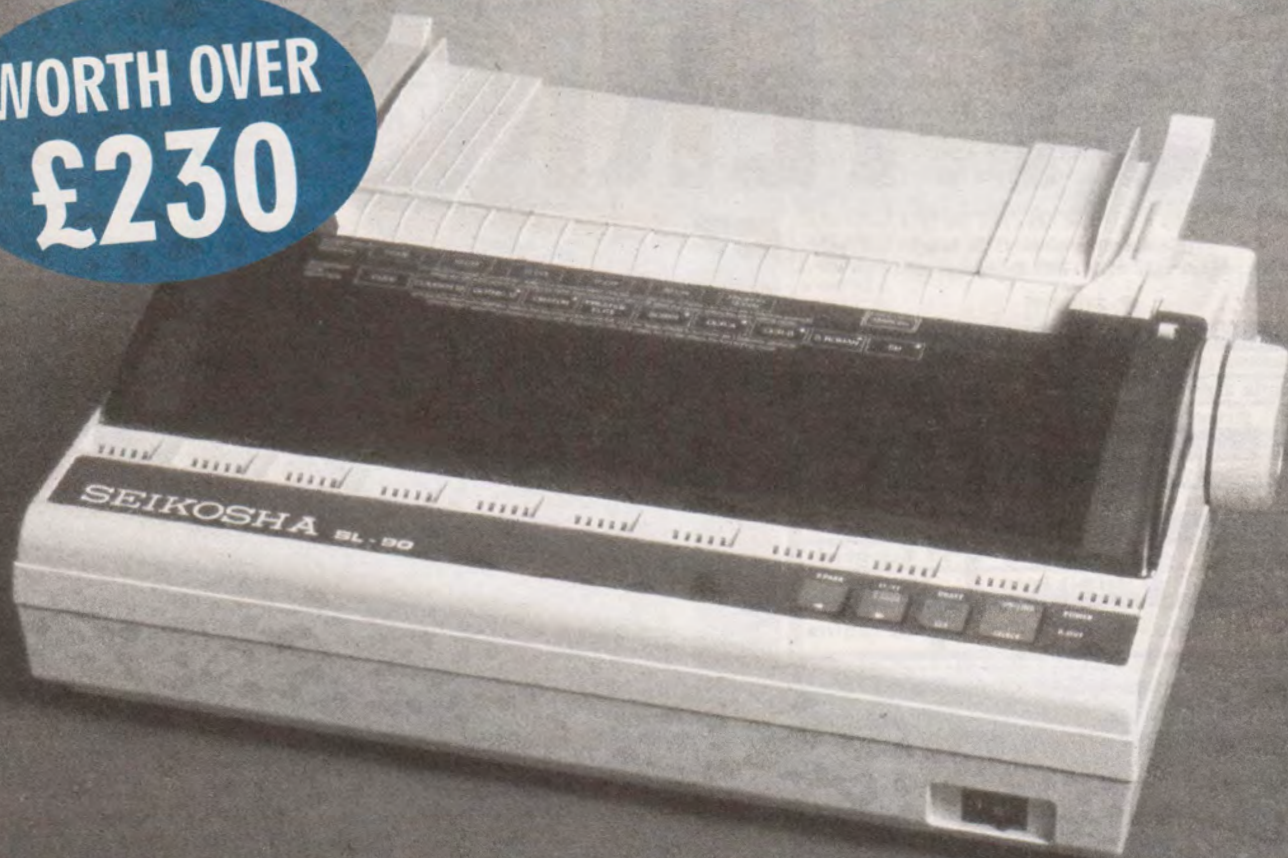
DOCUMENTATION ★★★★★

FEATURES ★★★★★

VALUE FOR MONEY ★★★★★

OVERALL **83%**

WORTH OVER
£230



WIN A SEIKOSHA SL-90 PRINTER

*Fancy a new 24-pin
printer for all your
post-Christmas
thank you letters?
Here's your chance
to win the excellent
Seikosha SL-90*

On page 47 of this issue, we take a look at the new entry-level printer from Seikosha, the SL-90. Amongst its many features is a tractor feed for continuous paper and a single sheet feeder for individual sheets. A cut sheet feeder is also available as an optional extra.

Print quality, as you'd expect from a 24-pin printer, is very good and the speed in draft mode is impressive. It has Epson compatibility, so you'll have no problems finding a driver to enable you to use it with your ST.

With a list price of £199 plus VAT, this printer represents great value for money. However, if your finances are overstretched after Christmas, we've got one to give away. All you have to do to win one is answer the questions opposite and send them to us on a postcard.

HOW TO ENTER

All you have to do to enter our competition and be in with a chance of winning your very own Seikosha printer is to answer the following questions and send the replies to us:

1. What is the maximum print speed of the Seikosha SL-90?
2. What is the maximum resolution (DPI) available on the printer?

Send your entry on a postcard or the back of a sealed envelope to **Printer Competition, Atari ST Review, 30-32 Farringdon Lane, London, EC1R 3AU**, stating your name and address, to reach us by 14th January 1993.

Please note that only one entry per household is allowed, and any multiple entries will be automatically disqualified. This competition is not open to employees of EMAP Images Ltd, Seikosha (UK) Ltd or their associates.

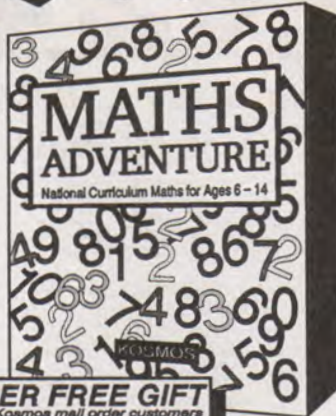
The Editor's decision is final and no correspondence will be entered into. There is no cash alternative. The winning entry will be the first correct one drawn from the hat after the closing date of 14th January and the winner will be notified as soon as possible after that date.

INCREDIBLE NEW RELEASE

FOUR GREAT GAMES

and all this Maths revision...

Times Tables
Addition
Subtraction
Multiplication
Division
Fractions
Decimals
Using calculators
Shape & Space
Money problems
Measurements
Number patterns



SUPER FREE GIFT
only for Kosmos mail order customers
**CASIO SOLAR
CALCULATOR**

MATHS ADVENTURE

Atari ST/STe & Compatibles

For ages 6 - 14

Price £25.99 inc. VAT

Now available from your dealer or direct from Kosmos.

Write or telephone for our new FREE 16-page colour brochure of Educational and Leisure software (Please state computer type)

Kosmos Software Ltd, FREEPOST (no stamp needed)
DUNSTABLE, Beds. LU5 6BR
Telephone 0525 873942 or 875406



Kosmos
SOFTWARE



★ BE A WINNER WITH EUROSTAR ★

WIN THE POOLS WITH EUROSTAR'S POOL SYSTEM.

Poolbuster can be easily configured for any league in the world. It predicts Homes, Draws, Aways, Fixed odds. Allows you to create your own divisions. Updates and finances itself. Price £23.50.

POOLSPLANNER v1.5 is the only capable program to create the best possible permutations to your heart's desire. It includes popular newspaper plans & home made plans. It can be used to create for you the ideal system that you can afford to play. It can create lines/combinations that can be useful for the pools, fixed odds or lotteries. It will even forecast. Plus more.....Use with or without Poolbuster. Price £23.50

EasyPredict for accurate, no fuss forecasting of potential winning lines - based upon past performance. Price £9.95

Combined together you will have a Pools forecasting system, second to none, which the pools experts would love to put their hands on. Buy combinations, save money:-

EasyPredict & 1 other - £28.50
P'buster & p'planner - £35.25
All three programs - £39.95

Ring for best hardware/software prices. We cater for ATARI, AMIGA PCs.

BOX of 10 x1 MB 3.5 branded disks £6.66
10x2 MB 35" HD branded disks £11.53
10x1.6 MB 5.25" HD branded disks £9.78

GEA-BASIC FOR MS DOS, WINDOWS, ATARI TOS, AMIGA O/S.

GEA-BASIC. Still as easy, but far more powerful. As structured as PASCAL, and as fast as C. It has never been easier to create professional looking programs. Over 150,000 ATARI users already persuaded.

The fast interpreter accepts abbreviated commands, checking syntax as each line is entered, allowing fast code generation. Has commands to support Graphics, Sound & I/O Ports (MDI, serial, joystick & mouse).

The compiler creates even faster stand alone programs/accesories. Also supports Assembler or C and Interrupt programming.

The manual includes command details, examples, and sections on GEM-DOS, BIOS, XBIOS, Line-A, VDI and AES.

Interpreter only £38.95
Compiler only £23.95

Highly portable! Available for AMIGA, MS-DOS and WINDOWS 3.1. Syntax compatible amongst all versions.

GFA Draft Plus 3.13 The ST Format Gold winning professional CAD package. Amazing value for money. Only £79.25.
For more information please call.

Cheques or P.O's to Eurostar C.C.Ltd (STR 3) Unit 45, 10-18 Manor Gardens, London N7 6JY, Tel: 071/272-8944. Fax: 071/272-9160.

PROFESSIONAL FOOTBALL MASTERS

Football Masters is the very latest Multi-Manager Football Simulator for 16 bit computers. After 5 years of development we are proud to announce the release of the most comprehensive football management game ever. This is the fourth and final revision. It's waiting to test your skills right now! Features include:-

Multi-Manager game for 1 to 4 Players. Three levels of difficulty. **48 Hour Dispatch Available.**

Choose six from fifteen **Tactics.** The player **Formation** routine is the most versatile ever created. You can inspect nearly all **Opponents Statistics** and you can see all **Pitch Sizes.**

Match highlights minute by minute, make substitutions or team changes at any time. Live injuries, yellow/red cards and named goalscorers. **Match Report** with possession, number of shots etc.

Full UK and European Cup itinerary. Includes FA, League, Zenith Data, Autoglass, European, Cup Winners and UEFA Cups. All cup match rules have been made as accurate as possible. Two leg ties, Extra time, Away goal rule, Seeded draws, **European Mini Leagues**, etc. You can physical participate in any **Penalty Shootout**, fully animated graphics, controlled by joystick and/or mouse.

All 4 league divisions (**includes Premier**) with play-offs and league expulsion.

Real initial, surname, league career records, height and age entered for all players as at the start of the 92/93 Season. Seven skill ratings per player, separate ones for goalkeepers. Plus 15 other special attributes like Captain, Super Subs & Mobility. Players **Preferred Foot.**

A lively and real-time transfer market, with an approach facility, negotiate wages and contracts, includes **Foreign Transactions.** Plus loans, free transfers and trainees. Unique and simple training system to improve player skills. 512K version excludes penalty sequence.

High quality printer facilities to list all the vital information. Masses of historical statistics on past games, players and manager. Realistic **Gate Capacities** and **Ground Improvements.**

Quick game data load and save. All screens updated quickly and displayed in a pleasant format, which is easy to use and comfortable to read. Fully mouse operated. Printed instruction booklet with plenty of diagrams. An Editor is available (as an extra) to add flexibility to the new or saved games.

An options screen allows some of the above to be switched off if so desired. Others not mentioned above include **Show All Goalscorers** (when possible) and **Show Transfer News.**

NEW ENHANCED 92/93 VERSION



Bold text highlights new features. Scottish version also available.

There are many, many other little things that make this game the most addictive and accurate interpretation of a Football Managers season. It would be impossible to list all the features in this advert but we assure you that this is the best. We have thousands of satisfied customers from our previous edition of this game, many are still playing it 2 years after purchase. See the order form below for details on how to order this incredible game. Available for all Atari ST's and Amiga's. PC WINDOWS version coming soon. © 1992

STABLE MASTERS

Four years of development by a racing expert has led to the release of this great strategy Horse Racing simulation. You can participate as the Owner, Trainer and or Betting Punter in this remarkable game. As the trainer you must try to discover the horses ideal racing conditions (mainly distance & going). Animated race display, formbook holds information on the previous 100 races, racecards, 200 different horses with independent personal profiles with over 50 different individual characteristics, tipsters, simple mouse and icon menu selection, up to five players may participate in the same game.

Amiga 1MB or any Atari ST. Only £19.95

24 HOUR CREDIT CARD HOT-LINE

(0702) 600557 Answer Phone Outside Office Hours
FAX (0702) 613747

MAIL ORDERS

All the programs detailed in this advert are only available through direct mail from ESP Software.

Name Address

Postcode Tel

I have an computer, please send me the following items:-

Quantity	Description (English or Scottish) *	Unit Cost	Total
	Professional Football Masters 512K (ST Only) *	19.95	
	Professional Football Masters 1MB *	24.95	
	P.F.M. Editor *	12.00	
	Stable Masters	19.95	
	POSTAGE (Non European Only)	1.00	
	GRAND TOTAL		

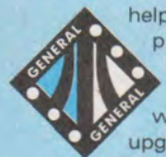
If you have a cheque guarantee card or credit card please write its number on the reverse of your cheque, doing so will ensure dispatch within 48 hours of receipt.

I enclose a Cheque/Postal Order made payable to ESP SOFTWARE.
Cut out and post this form to: (photocopies or written orders are acceptable) E. & O. E.
ESP Software (SR), 32a Southchurch Road, Southend-on-Sea, Essex SS1 2ND, UK.

ASK THE EXPERTS

Got a problem? Can't find the answer? Then write to us at Ask The Experts and our team of experts will work out all of your ST problems

KEY OF THE MATTER



I wonder if you could help me to solve a problem with my computer. I have an Atari 520 STE which I had upgraded a little while ago to one Megabyte. On cleaning the keyboard the other day, I accidentally snapped off the Alternate key and, in trying to fix it back on with superglue, I have made a mess of the keyboard.

Consequently, any software that requires that key is no longer of any use to me until the key is fixed. On making enquiries around different suppliers, I am told that Atari don't supply spare keyboards and that the key on its own can't be replaced. You see, the fact is I am prepared to fit the new keyboard myself and I think that is the reason that they are reluctant to supply me with it.

Could you tell me whether it is true that they do not supply spares, or am I simply being given the runaround by these people?

G. Millum, Northfleet, Kent

You're not being given the runaround, but there is a solution to your problem. Most companies don't stock spares in this kind of detail, but there is one that will sell you just the one key if that is what you need. It is also likely that you may have done more damage with the superglue.

With this in mind and if you have already tried ringing around likely repair centres in your area, I would advise you to contact the Atari Workshop and arrange for them to fix the keyboard or replace it as necessary. They can be reached on 081 693 1919, or write to them at 17-19 Blackwater Street, East Dulwich, London SE22 8RS.

MORE OLD TOS



I was very interested in your article 'Load Of Old TOS' in the November issue of Atari ST Review. My machine, bought from Silica in June of this year, is a 520 STE (which I have upgraded to one Megabyte).

Using a Sysinfo program, I discovered that my TOS is 1.98 and was built on 1/1/90 (or assembled two and a half years before I

bought it!). Now, having read other articles about 'late' STEs operating on TOS 2.06, should mine have this? I would consider June 1992 to be a late STE.

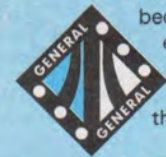
I bought the machine as price-matched to another company's price so I did not receive the extra games that would have come with it. I also paid for the upgrade, but do I have any comeback with regards to the different TOS? Could I claim the 2.06? When did Atari actually bring out the 2.06 version of the STE?

Jim Logsdon, Dartford, Kent

I think you missed a vital part of the article, Jim. Atari has never put TOS 2.06 in the STE. Only the Mega STE has this version of TOS and the TT has version 3.06.

As for your computer, try the Which ST? program on last month's cover disk. I think that you will find that you have TOS 1.62 in your machine and the Sysinfo software is incorrect. To my knowledge, Atari has never produced a version 1.98. The date, incidentally, is when the TOS was written and not when the machine was built, so it has not been sitting in a warehouse for a couple of years.

PROBLEMS, PROBLEMS



I am writing to you because I have several problems. Please could you try and solve them for me?

1. My father has a V23 modem which he uses in conjunction with a data terminal to send information to his head office at night. I have an Atari 520 STE with a one Megabyte upgrade. Is it possible to connect this modem to my computer? The modem has a 25-pin interface.

2. I am confused as to the difference between a 520 and a 1040 STE. Are there any, apart from the memory size?

3. Sometimes when I insert a disk into my internal drive, all I get is a clicking sound. Then when I try to access the disk it starts clicking again and a dialogue box comes up saying 'Drive A:\ is not responding, please insert a new disk or try again'. When I retry, then every-

thing works fine, but I am worried that there is something wrong with my disk drive.

4. I have an Amstrad DMP3160 9-pin dot matrix printer. It is Epson compatible and supports bit image graphics printing. Will I be able to print out using **Timeworks** or will I have to buy a printer driver? If I need a printer driver, can you tell me where to get one?

5. Another problem with my printer is that when I print out a **First Word Plus** document that includes imported graphics, the pictures end up being much bigger than they should be in comparison with the text.

This is annoying because the graphics sometimes overlap my text and spoil the printout. Any help in this area would be greatly appreciated.

6. The tips book that you published in your October issue was very good, but I cannot get the cheats for **Crazy Cars**, **Arkanoid II**, **Z-Out** or **Panza Kick Boxing** to work. Am I following them correctly? In the cheats book you mention a secret room in **Robocod** accessed by jumping on some snowmen. Where are these snowmen? I think I have found some things that look something like snowmen, but when I jump on them they don't move an inch. Please help me as **Robocod** is my favourite game at the moment.

Well, those are all of my problems and I hope you can answer them for me.

I have written this on **First Word Plus**, which was the only reason I bought your magazine in the first place. I am now going to buy ST Review regularly because it is the absolute best ST magazine. I am very grateful for your publishing such expensive applications on your cover disks and I'm looking forward to future editions. By the way, what day of the month is your magazine released?

Donald Walker, Lanark, Scotland

1. The modem should plug straight into the back of your ST through the serial port (the one on the left end of the computer as you look at the back.). The cable that is on it should connect with no problems at all.

2. As you correctly surmise, the only difference between the two is the memory capacity, so effectively, you now have a 1040 STE, although it's not badged up that way.

3. All that is happening is that you are not locating the disk in the drive properly. As you have done, make sure that you insert them cleanly and you shouldn't have any problems.

4. In Epson mode, you should have no problems in printing from Timeworks. If you find you need a specific driver, you have a bit of a problem. Timeworks uses GDOS printer drivers which is Atari's copyright. This means that the only way to get new printer drivers is to buy the upgrade.

5. There is no obvious reason why this should be happening from the explanation you give. Try making the graphic smaller on screen and leave a larger gap around them to cure the problem. Alternatively, now you have Timeworks, there is little need to add graphics in to First Word Plus anyway.

6. With the release of a lot of games on budget labels, some of them are reprogrammed to fit onto a double-sided disk. This could affect the cheat mode. The tips in the booklet could apply to either version, so don't be surprised if the odd one does not work. To get to the snowmen, go to the bottom of the castle and keep going left. You should find them there.

ST Review is in your newsagent on the 14th of each month.

WHICH WORD PROCESSOR?

Having recently bought my first computer (which is an Atari 520 STE) I wish to further my use of it.

The only function it is used for at the moment is gaming. Being a keen footballer and cricketer, I wish to write simple reports on each match I play and print fixtures, scores, averages and so on.

Could you please help me find a suitable word processing program and suggest a printer I should use.



I would also like to be able to write short stories for my children on the same disk and print them in a suitable book form.

Please could you bear in mind that this is my first contact with computers and a simple approach would be appreciated. I run my computer on a portable colour television. I hope this will not affect or restrict my use of the computer.

I read in ST Review about fonts, TOS, utilities and more, but to be honest, I have not got a clue what it all means and there does not seem to be a simple answer. Could you try to enlighten me on a few of these points?

Colin Latham, Lichfield, Staffs.

You obviously missed issue five, Colin. We gave away First Word Plus on the cover disks which would suit your needs. If you'd like to get hold of a copy, contact our back issues department. You will find the address and telephone number on the contents page.

The choice of printer really depends on how much you want to spend and what print quality you require. A nine-pin dot matrix printer is probably the cheapest, and is quite adequate for most cases where you are dealing with straight text. Take a look at the Star or Citizen range at your local dealer's.

As for the explanation of terms, I think that you'll find that most of your questions were answered by the booklet we gave away on last month's cover. If you missed it, it is a beginner's guide to the ST and is also available from our back issues department.

BACK TO BASICS

I obtained from you, via your cover disks, a copy of **HiSoft BASIC** (compiler version 1.31). On the strength of this, I sent away for the manual and was delighted to receive it within a couple of days.

I was a bit disconcerted by the disclaimer that I would get no support if I didn't pay a whacking great extra sum. Free disk owners can't be choosers, but I also bought the manual and expected more.

Imagine how I felt then, after three months of getting into it, when I found the graphics behaving completely at variance to what I wanted them to do.

For instance, in the medium resolution, 'BAR 50,50,50,50' will always draw an oblong twice as long on the Y axis, and not a square as you would expect. There is no such problem in low resolution. This in itself is not a great problem, I just divide all Y axis figures by two

and work round fractions.

A greater problem, however, is the mouse pointer. Locating the point of the arrow and getting the co-ordinates always results in a box lower down being filled.

Since I can't approach HiSoft now, being two months outside their absurdly short warranty, can you tell me if I'm doing something wrong, or if it's the software?

If it's not me, then perhaps I can think about demanding my manual payment back.

P. Lee, Bournemouth, Hants.

We spoke to HiSoft on your behalf and they stress that the fee covers the whole range of HiSoft products for your machine. It is payable by people paying the full price for their packages and not just some way of getting more money out of people who got HiSoft Basic from our cover disks.

The answers to your problems with the language are as follows:

- 1. In medium resolution, the screen display is such that there are more pixels in the horizontal plane than in the vertical. This means that you need to travel approximately twice as far horizontally to achieve the same distance as the vertical.*
- 2. PSET is a command used in an open window, so you must make the window full size before you try to program the mouse. Try adding the command WINDOW FULLW to your program before the PSET command. This should solve your little problem.*

FLYING LEAP



I have had a number of computers over the years, including a 520 STFM and now a 1040 STE. I am now looking with great interest at the Falcon.

I enjoy programming in Assembler, but have always had trouble finding information on how to utilise the various pieces of hardware in the machines (eg the blitter and DAM chips of the STE 0. The best book I have found is **Atari ST Internals** by Abacus Software.

Because I know from experience that Atari doesn't exactly drown its customers in documentation, I was wondering if you have any idea where I can obtain this kind of documentation for the Falcon.

M. Tomlinson, Edenbridge

Atari has only recently released the full documentation for the ST, but there's every reason to believe that a similar service will be provided for the Falcon soon after its release.

Have you got a problem? Can our team of experts help you? If you have any questions about your ST or any product or piece of software related to it, put it on paper and send it to us. We will try to answer it for you on these pages.

Please be patient with us, though. Due to the huge volume of post that we receive, it may take a while to deal with your enquiry. Although we will do our best, we cannot guarantee a reply and we are unable to enter into personal correspondence. Please do not send us any stamped, addressed envelopes.

Send your letter to: Ask The Experts, Atari ST Review, 30-32 Farringdon Lane, London EC1R 3AU, stating the nature of your problem on the outside of the envelope.



TONY KAYE
Technical help and general problems.

Our very own Tony Kaye will look at any problems related to the day-to-day running of your ST. He can help with technical matters like upgrades, disk drives and DIY projects.



OFIR GAL
HiSoft Basic and general programming.

What Ofir doesn't know about HiSoft BASIC, HiSoft doesn't know! If you've got a problem regarding Basic or 68000 programming, Ofir's your man.



GARTH SUMPTER
Games and consumer watchdog.

Garth will be looking at your consumer problems. He can tell you where to get a program and what to do if you're not satisfied once you've got it.



VIC LENNARD
Music, MIDI and sound recording.

Vic is Director of the UK MIDI Association. There's no-one more tuned in to the MIDI music scene than him. He can help with all of your music related problems from playing to recording. He's a wiz at the mixing desk, too!

If you have something to say, here's your chance to say it. Write to us here at ST Review and air your opinion. There's even a prize for the sender of the letter of the month.

LETTERS

FALCON HELL

I have decided to buy the new Falcon as soon as I have the money, but there are a few questions that I would like answered.

1. Will I need extra software or hardware to use the machine's genlocking capabilities? If so, how much will the add-ons cost?
2. Will I be able to upgrade to an internal hard disk drive later should I wish to, or will I have to take the external route?
3. I've heard rumours that early machines have no Multi-TOS, is this true?
4. Is Atari going to redesign the case? How long will this take? I also have a comment to make. When is Atari going to advertise the Falcon? True, a masterful job was done on the free publicity before the launch, but there should be more.

Maybe in this one respect they should follow the example of Commodore which floods the press with adverts at the slightest sign of new products. Note the A600 ads in ST magazines.

So remember, Atari, that "machines cannot live on press releases alone".

Peter Nichols, Abbey Wood, London

1 *The Falcon has many built-in facilities – and one that is particularly useful is the gen-lock feature. The video capabilities of the machine are actually one of its strongest features and obviously, software will be able to take full advantage of this...*

2 *As with all things still being developed, whether they be new computers or washing machines specifications may change, but at the moment it is likely that there will be an Atari upgrade kit released so that owners of the machine can install an internal hard drive.*

3 *Multi TOS is not expected to be installed in ROM for the machine anyway so it will be available as software.*

4 *At the moment there are rumours that next year, once a hardware base has been established, the machine will be packaged in two different ways,*

one of which will be a DTP type package which is rumoured to have a completely new keyboard (hurrah!).

TO MAIL OR NOT TO MAIL?

I can't say how delighted I was to get not only **First Word Plus** with your magazine, but also a series of tutorial exercises which I have found excellent.

Mail merges are an item I have long wanted to tackle but have never had the motivation to learn. Reading your tutorial on mail merge for **First Word**, I finally decided to give it a go and try and solve this great puzzle once and for all.

I have a small business that I run using my STE and store a lot of data via a database, mainly names and addresses. I used this, with your example, to export an ASCII file with inverted commas, and it worked perfectly. Next, on to creating the main document with codes inserted in the top of the document as per the example.

Finally, the mail merge. Yes, you guessed it, nothing at all happened. No **First Mail** program exists on my disk. I must confess to missing the October issue of ST Review, so I don't know if it was included.

It is unfair, I feel, to add mail merging to your tutorials, when the copy of the program that you are basing them on does not have this feature.

David Grieve, Glasgow, Scotland

Whoops! Well you certainly don't miss a trick do you? To own up to our mistakes here's the full story. We originally bought the publishing rights to First Word Plus but the rights to Mail Merge were not included. After some negotiation, we decided not to buy the rights – but unfortunately the production process on the mail merge article was too far advanced for it to be dropped.

So please accept our apologies... the best laid plans of mice and men etc...

WORDS OF PRAISE

First I would like to express my thanks to you for the splendid cover disks on the November issue of your magazine. I have

always wanted to try out DTP, but being a pensioner, have never been able to afford to buy a package. Thanks to you I now have a splendid set of **Timeworks DTP** disks, and will be able to make very good use of them.

My computer is an Atari 520 STFM which I have had for nearly 10 years and I think that the articles, general layout and the modern way of presentation is excellent. This letter is being written with the help of the **First Word Plus** word processor that was given away with the first issue of ST Review that I bought.

If future cover disks are of the same quality and usefulness, I am sure that your magazine will prosper. As I mentioned before, being a pensioner, I cannot afford to send for a year's subscription, but I will certainly be buying my copy each month.

Your offer of a new mouse was taken up and I am very well satisfied with it at the price of £9.99. It really was a bargain and much superior to the old Atari mouse which nonetheless, has given good service over the past 10 years.

Well, I think that I have said all that is needed about ST Review, so I will close now. I look forward to getting my hands on **Cyber Paint** and am sure that I will have much pleasure using it.

George Smith, Durham

The Atari probably has the greatest number of older people using it, which I think stands testament to the fact that it's by far the easiest computer for most people to get to grips with thanks to GEM and, unlike the Macintosh, serious software for it won't burn a hole in your pocket, especially as long as ST Review is around.

ST EMULATION ON A PC?

I enjoy reading your magazine very much. I have an Atari 520 STE. Just recently, I purchased a PC 386sx. Is there any way that I can run my Atari software on my PC?

Is there any hardware or software emulator on the market or do you know of any that may be produced in the future?

My PC has three megabytes of RAM, 120 MB hard disk drive and the screen is a VGA colour monitor.

K Alexander, Nantwich, Cheshire

Although PCs will read ST disks, making moving text files rather easy, to do, there is no way that ST programs can be run on a PC and as for emulators, there are no plans known to us to make a hardware based emulator for the PC.

DOCUMENTATION GRUMBLE

I waited until the November issue of Atari ST Review came out before writing to you in the hope that a problem may have been dealt with.

It was not resolved, however, and I wish to complain about the software on a cover disk - not the quantity, quality or value, but the documentation.

There is a growing tendency with ST-specific magazines to issue good programs, maybe obsolescent or superseded, but nevertheless OK and then offer the full manual for a much higher price than the cost of the magazine. This is all right of course, people don't have to buy them, but surely one should have a chance to try out a program properly first?

I refer specifically to **HiSoft BASIC** which came with issue four and my complaint is that a full list of commands for the language has not been released on disk or in print.

This, to my way of thinking, is similar to listening to a car salesman extolling the virtues of a car and then refusing to give you the keys to try it out!

Assume the cost of the disk is £1.00 and the cost of the manual, £16.95. In this example, that is equivalent to buying the car for £10,000 and then being charged £169,500 for the handbook so that you can find out how to drive it!

Come on, ST Review, give us the keys and let us have a proper test drive.

Despite this grumble, the magazine is very good and the cover disk material excellent and I wish you every success.

John Davies, Sale, Greater Manchester

There's always an opportunity cost to having a complicated program on your cover disk. When we put an application program onto a cover disk, what we are aiming to do is to show people just what they can do with their ST - they're not really intended for people who are already well-versed in that particular package.

What we try to do is to teach people that they can do more than just stick a game in the drive and shoot a few aliens. To this end we run tutorials and offer cheap upgrades to the latest version of a utility in case

people decided that they are really interested in an aspect of their ST and, having been shown the way, want to really fly along.

To this end, the HiSoft BASIC tutorial is still running. So far we've covered about 40 of the commands - and, as we unveil each one, people will have a chance to use and understand each command.

If you're already that far ahead, then perhaps you're a more professional user and should take advantage of the cheap upgrade.

To use your analogy, you're really not interested in the car that we have at all because you want a better one, but you're not prepared to wait to get one for free and won't pay to get a better one!

Regardless of that, though, we will be printing the whole list of commands in a future edition of the magazine.

MONO EMULATORS DO WORK

May I first add to the praise of your magazine. The balance of the editorial content is just about right and the cover disks are excellent.

Secondly, an objection. I disagree with the comment on page 34 of issue seven regarding mono emulators.

On the contrary, I find them to be very effective utilities. The mono picture quality on my Philips CM8833 is very good and, although they do run programs more slowly, their speed is acceptable.

Both the Monulator and Sebra have the ability to display all of the pixels of the monochrome screen by including a magnify mode, and both also feature a choice of speeds.

Thirdly, in reply to A Ripley in the same issue, you recommend quite a drastic action, namely deleting the file.

To temporarily disable your useful RAMdisk program, click once on the file FASTER.D.PRG icon and then use Show Info in the File menu to change its name to FASTER.D.PRX.

Then switch off, wait for a while before switching on again. If the RAMdisk is ever wanted again, it can be restored by renaming the file back to FASTER.D.PRG and rebooting.

Finally, I would like to share with your readers a tip for owners of HP Deskjet and Olivetti JP inkjet printers. When installing **Timeworks DTP** from the issue seven cover disks, choose the HP Laserjet Plus driver from the installation program. This gives perfect print-outs.

Philip Byford, Hemel Hempstead, Herts

With regard to mono emulators, you unfortunately omit to tell us what software you are running on your machine as it's the type of software that you run that dictates the usefulness of any emulator. There are a lot of mono only programs that will not run well if at all when you use a mono emulator.

As to the RAMdisk, what we tried to do was to keep it simple - you have a copy of the RAMdisk on floppy should you need it. Of course, there's nothing wrong with disabling the RAMdisk the way you describe.

MORE INFO, PLEASE?

I have been reading your magazine every month since it first came out. I own an Atari 1040 STE which was bought for me in May of this year.

Before this, I owned an Amstrad 1640 PC with hard drive and have been using computers at home only since they first appeared, but I am afraid that I do not understand the ST.

I would like to see a series on how to use the Atari's internal workings. For example, you always mention TOS and that each model is different, but how does one find out about these things? Could a small program be developed to tell the user what TOS he or she has? And how do we use TOS for programming purposes?

This is just one thing that computer magazines seem to overlook and assume that everyone reading knows what they are talking about.

Your series on **STOS** went some way to redressing the problem, but after a little while, not enough explanation was given of the commands used, and this is a basic language. Having said that, I thought that this series was very good.

Is it possible to make my STE PC compatible? I still have a few programs that run on the old PC machine and I do not want to lose them.

S Britton, Harwich, Essex

There was, in fact, a program on ST Review issue 8, which you will no doubt have used already, called Which ST.

Once run, this will tell you exactly what your ST is made up of. There was also a whole section on emulators in the same issue but just to reiterate our findings, we found the best PC emulator to be the PC/AT Speed.

MORE PRAISE

I have just read the October issue of ST Review and I am writing to comment on what an excellent magazine you produce. To be honest, I found the first two issues very

similar to the other ST mags, but now you are streets ahead of the opposition.

I think that the Buyer's Guide to hardware and your step by step guides to fitting such items as memory upgrades and the 'key click' set are great.

The competitions are great too, but could I suggest that you put all the coupons on just one page so that this can be cut out without spoiling the rest of the magazine. Also, why don't you just have one address for all of the competitions, or do you have shares in the post office or BT?

Thanks for a really great read. Keep up the good work.

K Wilson, Anglesey, N. Wales

Thanks for your comments. Unfortunately, different competitions are organised with various companies and so administration for them is sometimes done outside of our normal system, but this is a small price to pay as long as we can bring you the very best competitions possible. As regards cut-out coupons, we do accept photocopies, so if you have access to a photocopier, this is one solution.

SPREAD THE PAYMENTS

I would like to start this letter by saying that your magazine is by far the best.

I bought my 520 STE the week before your magazine was first released. I specifically bought this machine because of its built-in MIDI ports and abilities and also to learn something about computing at the ripe-old age of 27.

I had no previous experience of any kind with computers and no help available in Newcastle (an Atari free zone).

So what, you may wonder. Well, first of all, a one meg upgrade courtesy of ST Review, MIDI Tutorials every month, I'm typing this with **First Word Plus** and I have recently started programming with your **HiSoft BASIC** giveaway.

Your magazine has helped me enormously to understand what my ST is capable of.

In short, everything I bought the ST for and quite a bit more. One small gripe, though. Could the three leading ST magazines, Review, Format and User please spread their release over a four week period, as they all seem to be released at once.

This means that I, and presumably many others, have to fork out nearly £11 one week, feverishly spend the following seven sleepless nights and days reading and trying everything out and then spend the next three weeks twiddling our thumbs.

Lastly, I would like to point out the fact that Atari doesn't seem to spend any effort in supporting their

product. While shopping around to buy my ST I was met with blank looks and incredulity every time I mentioned what I wanted, even in shops that stock Atari products.

In Dixons, the assistant couldn't help me as he had no idea about consoles and the like - he only dealt with PCs.

I hope this is not a national problem, or the Falcon has no chance, regardless of its specification.

Stephen Kelly, Newcastle-upon-Tyne, Tyne and Wear

Some of what you say is certainly cause for concern - especially when we are all looking towards the marketing of the Falcon to beat that of its only near rival, the Amiga 1200. However, as reported in ST Review issue nine, the whole marketing setup of Atari is currently undergoing a huge change. So Atari certainly seems to be aware of its previous reputation and to be doing something about it.

TITLE NOT WORKING

I am writing to warn your readers about the very poor support given by Working Title for its **Calligrapher** document processor.

After buying **Calligrapher Gold** on the basis of some reviews and on its advertised features, I found I was pretty happy with the product except for a number of bugs in the Postscript driver. Some of the bugs were fundamental; for example, a letter 'o' drawn with FlexText was completely filled producing a 'blobbing' effect.

I was not too worried about these bugs, as they were so obvious I thought that all I would need to do would be to call Working Title, explain the problems and get a fixed driver.

However, their Mr. N P Johnstone refused to accept that there were errors in the output until I had spent some time producing and sending test documents to show the problems.

By return I got a badly spelt, unsigned letter printed on a dot matrix printer with at least one of the pins missing. More importantly, their letter still refused to accept some of the errors.

I followed this routine again, producing new test documents and even picked out the lines in the Postscript code which were wrong. Again, WT either refused to accept many of the bugs, or just claimed that they were not worth fixing. One problem that came into the category of problems "not worth fixing" was that where **Calligrapher** had to draw character outlines itself, some coordinates on the outline were a few points out, producing characters with an effective resolution of about 60 dpi, even on a 1200 dpi printer. Mr. Johnstone's reply to my com-

plaints were that I should have bought **That's Write** instead!

I made enquiries with the Atari groups on UseNet to see if other users had similar problems with Working Title, and several people sent stories showing the same poor level of support.

Calligrapher Gold consists of **Calligrapher Professional** with some added 'Paks'. A quote I remember from Sound-on-Sound magazine was that any product with 'Professional' in the title is only ever suitable for amateur use. **Calligrapher**, due to its support from Working Title, seems to be a prime example of this.

David Stevenson, Reading, Berks.

I've forwarded a copy of your letter to Working Title and hopefully we'll be printing their comments to it in next month's issue of the magazine.

MISSING LINK?

I looked forward keenly to reading the review of electronic organisers in the December edition of ST Review, but was amazed to find that the Atari Portfolio was com-

pletely ignored. I do not own a Portfolio but am considering buying one because from what I can find out it seems to offer at least as much as the Psion 3, for example, and at a much more reasonable price. Can you explain why it was omitted from your review and would it be possible to give an opinion of its merits or otherwise in your magazine?

One other little gripe while I'm at it: can you also please explain why the Psion competition is only open to residents of the UK mainland? Surely you can not be guilty of ethnic discrimination here?

G.C. Hudson, Bangor, Co. Down

As you may have noticed on the organiser reviews, last month was the first part of the feature. And as you will have noticed by now, the Portfolio was reviewed this month and did rather well.

Atari's Portfolio was certainly not ignored and happens to be a personal favourite of mine as I mess around on PCs from time to time and DOS is like an old friend to me. So if you use DOS then you should take a look at

the Portfolio: the review starting page 36 gives you a chance to decide for yourself.

The Psion competition is only available to mainland UK due to the cost of shipping the units and also because it is run as a phoneline. We are certainly not being racist: anyone can enter. We are however discriminating on a geographical basis but I don't think that that breaks any particular laws, including libel, does it?

Send your letters to **Points of View, Atari ST Review, 30-32 Farringdon Lane, London, EC1R 3AU**. The sender of the letter of the month will receive software to the value of £50.

Please note that although we try to read every letter and answer as many as possible, but we cannot guarantee to reply to them all. Personal correspondence cannot be entered into. Please do not send stamped, addressed envelopes. We reserve the right to edit letters where necessary without altering the context.

EYE SAY!

Your advice on avoiding backache (**Back To Basics**, Issue seven) is very welcome, but another health aspect that needs to be addressed is that of eyesight.

It is always assumed that the computer generation consists solely of young people, but many of them are now grown up, they wear glasses and will soon discover that as the eyes get older they are less accommodating and need different lenses for distant and close work.

Separate glasses are a nuisance and most of us opt for bifocals, but when it comes to using the computer there is a snag because the monitor is up in the air and we need to look at it through the bottom section of the lens. As you can guess, after a prolonged period of tilting the head back, the back of the neck begins to ache.

I have alleviated this to a certain extent by digging out an old pair of glasses and using blu-tack under the bridge to wedge them high up on my nose, bringing the lower lens up level with the iris.

It so happens that with the normal ageing process, your previous prescription is about right for the extra few inches at which you view the monitor compared with reading a book.

In the long term, though, equipment manufacturers will have to look to a different way of arranging the hardware.

Instead of sitting on top of the computer, the monitor needs to come down at least to desk level and preferably lower.

In my view, the right arrangement would be a copy of what air traffic controllers do, with a console in which the screen is low down and tilted backwards, with the keyboard just in front of it.

Instead of looking on the work station as a desk with a computer on it, the time has come to treat it as a computer with a desk built around it. Now is the time for the industry to call in the ergonomists!

As a matter of fact, I think you would find that there are so many oldies using computers already that we constitute quite a niche market. At least 10 per cent of the men in my retirement club use them, mainly

LETTER OF THE MONTH

for word processing and home accounting.

We don't go much on space-age games, but we are quite keen on simulations.

Considering that we are the generation that fought World War II, the new **Air Warrior** should go down a bomb with us!

T.R. Boys, Tewkesbury, Glos.

Thanks for your letter. As people who use computers at work (for up to 12 hours a day sometimes), we're not without a few tips ourselves concerning eyesight and computers.

Your first criticism of your lens, I'm afraid, is a problem that anyone with bifocals will experience and if you try to compensate for the problem by tilting your head back or, as you seem to have done, inventing some peculiar Heath Robinson affair, then whilst your eyes may be okay, you may find that you run the risk of back problems.

If you spend any large amount of time using a computer then you should try to observe the following points:

- 1) Get a pair of glasses that are specifically for use with the computer. I find cheap, light glasses with plastic lens are ideal and if you have a screen that has a lot of glare, then it's cheaper to get your lenses tinted than to buy a screen cover.*
- 2) When working with a computer screen it's always a good idea to have an alarm loaded as a desk accessory. Set it to go off once an hour and then spend at least five minutes away from the machine and go to a window and focus on something as far away as possible. This actually exercises the muscles of your iris and reduces the possibility of eyestrain.*
- 3) Don't work in a darkened room without a light source. It may be fine when you're at the cinema but to work in the dark, focused on a screen for a length of time can lead to headaches, blurred vision and even nausea.*

99p

PER DISK

MERLIN
PD

99p

PER DISK

Tel/Fax 0453 882793

NOT ONLY Do we offer a fast, friendly and efficient service.

BUT ALSO We ask you to choose the programs you want on each disk.

SO, FOR GOOD VALUE AND SERVICE, COME TO US

Stockists of Shoestring Educational Software

Send S.A.E (9" x 6' min) for printed catalogue or £1.00 for disk catalogue to:

**11 Grange Close
Minchinhampton
Stroud, Glos
GL6 9DE**

CHRISTMAS AND NEW YEAR SPECIALS

specialist software

VIDEO TITLER

VIDEO TITLER ST V.2

£29.95 ~~£34.95~~

PROFESSIONAL TITLES FOR ALL VIDEO FORMATS
SMOOTH TEXT/FONTS, FLIPS, COLOUR-CYCLES, VENETIAN, WIPES, FADES, DISSOLVES, INTERLOCK, SCROLLS, SPEED CONTROL, SUPPORTS G.DOS & FSMG, DOS, NEO, DEGAS, & PI1. THE MOST ADVANCED TITLER. ST REVIEW ESSENTIAL BUY 92%.

Complete with GDOS fonts system

ART MASTER ST/STE

£24.95 ~~£29.95~~

SUPERB NEW ART PACKAGE FOR THE ST
3D GRAPHICS ADVANCED BLOCK MANIPULATION, DISTORTION & MORE. NEO, DEGAS, AMIGA IFF COMPATIBLE, 9 WORKSCREENS, 4096 COLOURS, RAY, GRADIENT, 3D CONES, SPHERES, SHAPES & IT'S USER FRIENDLY

Complete with colour print driver.

VIDEO TITLER & ART MASTER - Combined price £54.95 £49.95

PRINT MASTER ST/STE

£19.95

ULTIMATE COLOUR DRIVER FOR COLOUR & MONO PRINTERS
PRODUCE COLOUR ON A MONOCHROME PRINTER. FULL COLOUR SHADING SUPPORTS MOST PRINTERS. TRI-COLOUR AND PROFESSIONAL COLOUR SEPARATION, LABEL ROUTINES, SUPPORTS EPSON, CANON BUBBLEJET, STAR, CITIZEN, 9/24 PIN, HP DESKJET, IBM, NEC ETC.

SUPERB FULL COLOUR SCREEN DUMPS MADE EASY

Video Titler Version 3 and upgrades
available from January.
Falcon software soon!!

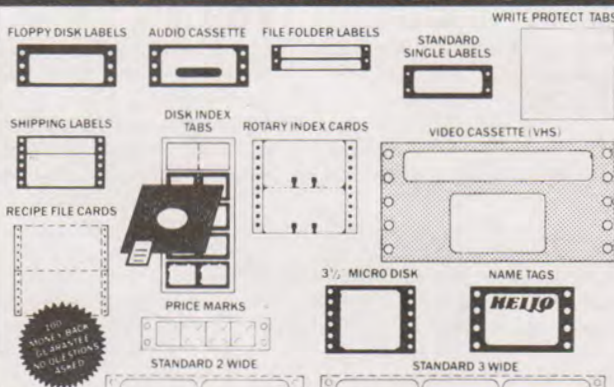
ACCESS, VISA & SWITCH NOW AVAILABLE

LASER DISTRIBUTION LTD, Dept STR
PO BOX 1, CALLINGTON PL17 7YZ
TEL 0579 82426



Price Breakthroughs From creative MEDIA STORE LTD

CONTINUOUS LABELS



DESCRIPTION	SIZE	QUANTITY	PRICE
Audio Cassette	3 1/2 x 1 1/2	100/pack	£4.49
Disk Index Tabs	1 x 1	75/pack	£2.49
File Folder	3 1/2 x 1 1/2	250/pack	£2.49
Floppy Disk (5 1/4)	3 1/2 x 1 1/2	100/pack	£3.99
Price Marks (4 wide)	3 1/2 x 1 1/2	100/pack	£4.49
Micro Disks (3 1/2)	2 7/8 x 2 1/2	100/pack	£5.49
Name Tags	3 1/2 x 3/8	100/pack	£4.49
Recipe/File Cards	3 1/2	200/pack	£5.99
Rotary Index Cards	4 x 2 1/2	200/pack	£5.49

ACCESSORIES

40 Capacity Disk Case	£3.95
80 Capacity Disk Case	£4.95
Pack of 3 Library Cases	£3.49
Cleaning Kit	£1.39
(State 5 1/4" or 3 1/2")	
Mouse Pad	£1.99
New Style Mouse Pocket	99p
Desktop Copy Holder	£6.99
K-Arm Copy Holder	£12.99
Universal Printer Stand	£4.99
Printer Stand & Tray	£6.99
Monitor Copy Clip	£3.99
Universal CPU Stand	£6.99
14" Colour Screen Filter	£8.99
12" Mono Screen Filter	£8.99

FULLMARK RIBBONS

Amstrad DMP2000/3000/3160	£2.49 each/£14.94 pack of 6
Amstrad 8512/8256	£2.24 each/£13.44 pack of 6
Amstrad LQ5000	£3.99 each/£23.94 pack of 6
Amstrad DMP4000	£2.49 each/£14.94 pack of 6
Brother M1409	£2.95 each/£17.49 pack of 6
Citizen 1200	£1.99 each/£11.94 pack of 6
Epson MX/FX80/800	£2.37 each/£14.29 pack of 6
Epson FX1000	£2.49 each/£14.94 pack of 6
Epson LX/80/86	£1.99 each/£11.99 pack of 6
Epson LQ400/500/550/850	£2.49 each/£14.94 pack of 6
NEC P2200/P2+	£2.49 each/£14.94 pack of 6
Star LC10	£1.58 each/£9.49 pack of 6
Colour Star LC10	£4.75 each/£28.49 pack of 2
Star LC24-30/24-15/24-200	£2.24 each/£13.44 pack of 6
Star NL30	£2.74 each/£16.44 pack of 6
Univ Panasonic KXP1080/1124	£2.49 each/£14.94 pack of 6

Prices Include VAT @ 17.5%. Available in 6 Packs Only

BANNER ROLLS

Banner Rolls, 45 feet with no seams or perfs! Creating large messages was never easier. Say goodbye to seams, perforations and tape! Now you can produce professional banners and signs with Banner Roll. This revolutionary computer paper is a continuous tractor feed roll of medium weight quality paper that has no cross perforations and microperf edges for clean, finished output. Print your next sales promotion, convention slogan or party message on a Banner Roll. Forty-five feet of paper in 15 fabulous easy to use colours.

COLOURS include: - Powder Blue, Harvest Gold, Pastel Yellow, Arctic White, Neon Orange, Neon Green, Neon Red, Neon Pink, Brite Red, Brite Yellow, Brite Green, Party and Holly. **Only £9.99 each.**

NEW Banner Rolls now available for 132 column printers. Available in Powder Blue, Pastel Yellow and Arctic White. **Only £12.99 each.**

NEW BannerMANIA PC supplied on both 3 1/2" and 5 1/4" **£39.99.**

HEAT TRANSFER PRODUCTS

Print your T-shirts with our special heat transfer ribbons, colour pens and your printer. Our special heat activated ink transfers an image from paper to a T-shirt, penetrating the fabric for a long-lasting washable image.

You will get from 25 to 90 transfers per ribbon, depending on the size and density of your graphics. Simply print the image on computer paper with the transfer ribbon and use our colouring pens to give your transfer colour. Then iron the transfer onto a T-shirt or other fabric and you have it! Our complete, clear instructions are included.

In order to print our words you need a software program which reverses the printout. However, reversing graphics is usually not necessary for graphics that don't have words.

Star LC10	£9.99	Citizen 1200	£12.99
Epson MX/FX80	£12.99	Panasonic KXP1180	£14.99
Epson LX80	£9.99	Star NL10	£12.99

FABRIC CRAYONS

Set of 8 crayons, ideal for children **£4.99**

FINE PEN SET

Set of fine tip marking pens in 5 colours **£12.99**

JUMBO PEN SET

Set of 5 wide tip for large area filling **£14.99**

3 1/2" DOUBLE DENSITY DISK PRICES

PRODUCT #	DESCRIPTION	SIZE	QUANTITY	PRICE
521	Double Density	3 1/2"	10	£4.95
522	Double Density	3 1/2"	25	£9.95
558	Double Density	3 1/2"	50	£18.95
559	Double Density	3 1/2"	100	£36.95
523	Double Density	3 1/2"	250	£95.00
524	Double Density	3 1/2"	500	£175.00
525	Double Density	3 1/2"	1000	£325.00
560	Double Density	3 1/2"	1500	£495.00

HOW TO ORDER

All prices include VAT @ 17.5%. To order by mail write your order details on a piece of paper. Add the relevant postage/packaging & insurances charge. Make your cheque/postal order payable to Creative MEDIA STORE Ltd., or write your credit card details and post your order to us at the address below. Credit card orders are accepted by telephone, please have your order ready before telephoning.

PURCHASE ORDERS

Government, County Council, Health Authority and Education Purchase Orders are welcome.

Postage, Insurance and Packaging Charges	ORDER AMOUNT	CHARGE
	less than £4.99	£1.25
	£5.00-£19.99	£3.00
	£20.00-£39.99	£3.25
	£40.00-£74.99	£3.50
	£75.00-£99.99	£3.75
	£100.00 & above	£4.25

SALTERS LANE, LOWER MOOR, PERSHORE, WORCS., WR10 2PE



0386 861199
FAX: 0386 556555

Call For Your Free Catalogue



ACCESSORY

An accessory is a program that is loaded into the memory of the ST when you switch on if it's in the AUTO folder on either your hard drive or boot disk. It can be accessed whenever needed using the menu bar at the top of the screen. Identified by the extension .ACC, these programs are placed in the root directory of the boot drive (see the explanation below). There are many different types of accessory available, ranging from clocks and calculators through to text editors and disk formatters.

AUTO FOLDER

A folder placed on your boot disk called AUTO will cause the programs in it to run whenever you switch the computer on. This can only be done with certain programs, however - usually enhancements to the system such as mouse accelerators, bug fixes, RAMdisks and so on. This folder is created in the same way as others, but it is the only one that the system is capable of recognising for autobooting programs.

BOOT DISK

This is the term used for the disk in the internal disk drive (drive A) when you first switch on the computer. It can contain an AUTO folder and accessories for use during that work session. If you have an autobooting hard disk drive, the boot drive is usually drive C.

CARTRIDGE PORT

The port on the left-hand side of the computer can be used to plug in programs in the form of cartridges. It can also be used to plug in anti-piracy devices for certain software applications. These programs will not run unless they can find this plugged-in hardware, which is known as a 'dongle'.

DESKTOP

The desktop is the screen that you are presented with each time that the computer starts up. This usually consists of a green screen with a menu bar at the top and icons for disk drives A and B, although you can change this should you want to do so.

LEARN THE LINGO

ST JARGON EXPLAINED

ERROR MESSAGES

Error messages are a common occurrence on the ST. Unfortunately not very well documented, error messages occur when something is wrong. It may not be a complete disaster. For example, an 'out of memory' message may be cured by removing some accessories at boot-up.

FUNCTION KEYS

The 10 keys along the top of the ST keyboard. They can be programmed and used for many different purposes depending on the program you are in. In some programs you can configure them yourself to give you shortcuts, called Macros.

GEM

Stands for Graphics Environment Manager. This is the system of windows, icons and mouse pointer that is used with the ST.

HARD DISK

A hard disk drive is a fast, convenient method of storing programs and provides a reliable alternative to a floppy disk drive. It has a much larger capacity, but it is more expensive to buy and is less portable than a floppy.

ICONS

The pictures that depict programs and files. These can be changed on the latest versions of the operating system, but on the STFM and STE you are stuck with the icons that come with it.

JOYSTICK

Used for games playing mostly, the joystick is an alternative method of controlling movement on the screen.

K

An often used abbreviation for Kilo as in Kb. One K is a multiple of 1024, therefore one Kb is one kilobyte or 1024 bytes (a byte is one character of information or just a single space).

LASER PRINTER

A high-quality form of printing using laser technology. The principle is similar to a photocopier.

MENU BAR

At the top of the working screen, there is a line of words offering the

options available to you. Run the mouse to the one you want and a further menu will drop down. Then select the option you want to run by highlighting it with the mouse.

NETWORKING

Connecting your ST to a friend's using a lead is a simple form of networking, using one machine to control or serve others. The Falcon has a new socket on the back marked "LAN", which stands for Local Area Network. This will make networking easier.

OUTPUT

This term is used to describe anything that leaves your computer in the form of information. This can be directed to either the screen, printer or disk drive.

PATH

The term path is used to describe the route to the files accessed by a program. If the files are held within a folder or several folders, then the path will be through each one. Some programs will allow you to set separate paths for data files, program files and information files. **Timeworks**, for example, has different paths for the program, overlays, fonts and data.

QUIT

The command used by a lot of programs to exit.

RAMDISK

A RAMdisk is an area of the ST's memory that is set aside to have the characteristics of a very fast disk drive. Anything that is stored in this manner will, however, be lost when the computer is switched off, so it's important to make sure that you save anything in it to disk before turning the power off.

ROOT DIRECTORY

The contents of the first window opened on a disk. An Auto folder or an accessory needs to be in the root directory of the disk that you boot up with, otherwise it will be unable to load.

SAVE GAME

Complex games usually have a save game option. This enables you to start from where you left off, rather than constantly having to go back to the beginning.

Just got an ST for Christmas? Still getting to grips with the terms used? Our jargon buster may be just the thing to help you. . .

TRACKBALL

In simple terms, an upside-down mouse! This is a ball device used instead of a mouse for moving the pointer around the screen.

USER

That's you!

VIRUS

A small, unpredictable program that attaches itself to the boot sector of your disks and duplicates itself. Most of these are harmless and were created as programming exercises, but some can do your computer and disks real damage. Use a virus checking program and always switch your computer off between disk swaps where possible to minimise any risks.

WINDOWS

When you open a disk drive by double clicking on it, a window will appear. You can normally have up to four windows open at any one time, but later versions of TOS and some alternative desktops will allow up to seven and beyond.

X-CONTROL

Atari's new configurable Control Panel allows you to edit your environment for comfort in terms of colour, mouse response, keyclicks, bell and other options. This panel is able to configure other programs using files called CPXs.

Y MODEM

A transfer protocol used for transferring data by using a modem on a telephone line. There is also X modem and Z modem (the latter being the fastest).

ZOO

A method of compression of data usually used to send programs via a modem.

TOS

Stands for The Operating System (or Tramiel Operating System, depending on which books you read!). This refers to the desktop and all of the routines built in to the computer. The latest version in the STE is TOS 1.62, although the Mega STE has TOS 2.06, the TT, 3.06 and the new Falcon, TOS 4.00.

CHARTS

Here it is, hot off the press. Find out what others are spending their money on, and then decide which games to buy...

FULL-PRICE GAMES

1 Sensible Soccer	Renegade	£25.99
2 Lotus III - The Ultimate Challenge	Gremlin	£25.99
3 Grand Prix	Microprose	£34.99
4 Space Crusade	Gremlin	£25.99
5 Secret Of Monkey Island	US Gold	£25.99
6 Jimmy White Snooker	Virgin	£25.99
7 A320 Airbus	Thalion	£34.99
8 Robocop 3	Ocean	£25.99
9 Championship Manager	Domark	£30.99
10 Castles	Electronic Arts	£25.99

BUDGET GAMES

1 James Pond	GBH	£7.99
2 Dizzy - Prince of the Yolk Folk	Codemasters	£7.99
3 Treasure Island Dizzy	Codemasters	£6.99
4 Lotus Turbo Challenge	GBH	£7.99
5 Steg The Slug	Codemasters	£7.99
6 Italia '90	Kixx	£9.99
7 Robocop	Hit Squad	£7.99
8 CJ in the USA	Codemasters	£7.99
9 Rick Dangerous	Kixx	£7.99
10 Captain Dynamo	Codemasters	£7.99
11 Rainbow Islands	Hit Squad	£7.99
12 Super Off Road Racer	Tronix	£7.99
13 Bubble Bobble	Hit Squad	£7.99
14 Manchester United	GBH	£7.99
15 Magicland Dizzy	Codemasters	£7.99
16 Falcon	Action 16	£14.99
17 Spike in Transylvania	Codemasters	£7.99
18 Pang	Hit Squad	£7.99
19 Int. Karate +	Hit Squad	£7.99
20 Pro Tennis Tour	Hit Squad	£7.99

ST REVIEW FAVOURITES

We asked around the office to find out what the experts have been playing and using

TONY KAYE - TECHNICAL WRITER

"I use utilities mostly, but I like to relax with a good game now and again"

1. ROGUE - A great little game that was around when I first got my ST in 1985/6. I recently rediscovered it and I'm always playing it. I wonder who has the rights to it now: it used to be Epyx, but they're no longer around.

2. LEMMINGS - The original and best. I managed, after many sleepless nights, to complete it all. I await the new offering, Lemmings II from Psygnosis with baited breath.

3. HEROQUEST - I'm a sucker for a good board game of Dungeons and Dragons and I find I can lose myself in this one.

4. JIMMY WHITE'S WHIRLWIND SNOOKER - Archer Maclean's great adaptation of snooker is addictive in the extreme. As a pool player, I can't wait for the new Pool from Archer. Having seen some of the pre-production versions, I think I'm in for even more late nights.

5. DEFENDER - All the clones and copies of this original game put together can't match the original for sheer gameplay. Just the one to take your mind off the frustrations of a day in the ST Review offices!

GARTH SUMPTER - EDITOR

"I don't play a lot of games any more (except for some of the more strategic ones), but I have a lot of old favourites that I get around to playing every now and then"

1. RANARAMA - This one was (unfortunately) given away with the old Discovery packs a few years ago which has effectively killed it as a product, but it remains one of the best maze and magic games ever - uncomplicated and great fun!

2. CAPTAIN BLOOD - This was one really weird offering from the French company Infogrames. It had stunning graphics for the

time but took some time to get into as you had to learn an icon language to use in the game.

3. STUNT CAR RACER - This was re-released in July by budget label Kixx and is one of a series of excellent products written by Geoff Crammond. It's a roller-coaster of a race and you can even link up to a friend's ST and race directly against them.

4. PRINCE OF PERSIA - This game single-handedly made the whole computer games world sit up and take notice when it was released in 1991. The animation of the characters is absolutely breathtaking.

5. DUNGEON MASTER - The game that launched a thousand clones! There isn't a modern dungeon/combat strategy game that doesn't owe part of its design to the grand-daddy of them all. Absolutely superb!

VIC LENNARD - TECHNICAL EDITOR

"I only recently bought a colour monitor, so games are not my scene, but I've used a lot of utilities and have my favourites"

1. CUBASE - Someone in my position has to pick this one as it is now the most popular MIDI software on the ST and used by everyone from the home user to top bands.

2. FIRST WORD PLUS - This really is a great word processor, although I must admit that I use version 3.20. It's ideal for letters and the usual typewriter jobs in the home.

3. SENSIBLE SOCCER - This was the first game I really got into. When it came into the office, I just couldn't stop playing it.

4. REPLAY 16 - This is simply the best sound sampler available on the ST

5. WORLD CLASS LEADERBOARD - Ideal when I haven't got the time for a real round of golf, I load up Leaderboard and play a quick round in the office without everyone having to hide under their desks.

THE BLITTER END

ROGUE'S GALLERY

Just what do they look like? Prepare to find out as we uncover the whole ST Review team



Garth Sumpter
Known for dramatic pauses and insomnia, Garth's energy belies his horrific age.



Nigel Taylor
Proving that size really doesn't matter, Nigel has a giant task every month that men of twice his stature would balk at.



Sara Puce
She looks quiet, reserved and dainty but has all the subtlety of a neutron bomb wrapped in a slice of lemon.



Remzi Salih
Exotic and mysterious Remzi conjures up all the romance and passion of the far east – a real Turkish delight!



Heather Turley
Small but perfectly formed, Heather's lungs are known for their occasional volumatic outbursts!



Becky Willis
Young and talented, but often troubled by telephone callers who want to talk about Becky's shoes (Try 0858 410510).



Sarah Connell
Gorgeous, pouting Sarah is our very own Liver bird and is almost small enough to fit into a gilded cage.



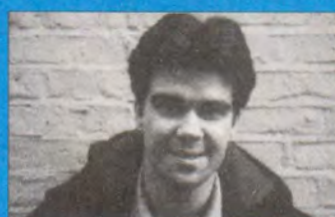
Tony Kaye
Tony works like a smoothly-lubricated engine although we wish he wasn't so well oiled from time to time.



Vic Lennard
Mr Logic is known for his intellect and ability to interact with any computer without recourse to a keyboard.



Jo Winslow
Ageless like the Sphinx and smelling slightly sweeter, Jo is a woman of mystery. No-one understands a word she says...



Gordon Barrick
The Rolf Harris of Earl's Court, Gordon's bent on ST Review being almost as ruggedly handsome as he is!



Esther Rodd
After a hectic day of running around like crazy, Esther loves to rest up by getting down to the latest rave dance music.

DEAR MR. NEWSAGENT

Use this coupon to reserve your copy of ST Review on the 14th of every month

Please reserve me a copy of Atari ST Review every month starting with issue number.....

* I will collect it from you/please deliver it to my address.

* Delete as necessary.

Name:

Address:

.....

.....

.....

Newsagents note: Atari ST Review is an EMAP Publication and is distributed by BBC Frontline. If you have any problems obtaining copies of this magazine, please contact us on 0733 555161.

AND SO TO BED...

So, we say goodbye to 1992. It's been a great year for all of us on ST Review and we're happy to have been able to announce the coming of the new Falcon computer. So what else is there to look forward to?

We hope that 1993 will see the Falcon establish itself as the computer that everyone wants to own. With its DSP and other features, it is sure to become a firm favourite once the initial supply problems have been cleared up.

With cheap emulation, we should see CD ROM become more prevalent in computing with new, better and faster games and utilities in the offing. Music will benefit from these advances too.

So, 1993 looks to be a bright year for the Atari family. Forget all of the doom and gloom that other magazines would have you believe. Stick with ST Review, the brightest, biggest and best ST magazine on the magazine racks!

Happy New Year!



Devpac 3 £79.95

HiSoft Devpac 3 is the latest version of the popular assembler / debugger package for all Atari 680x0 computers. Packed full of features, it is the ideal programming environment for beginners and professional programmers alike.

Improved and extended, the Devpac 3 macro assembler is now often 40% faster than its predecessor (without using pre-assembly), has many extra, switchable optimisations and, with the ability to pre-assemble files for inclusion, can now claim to be the fastest assembler on the Atari computers. It produces 68000 up to 68030 code (via a user option) & supports the maths co-processors.

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary include files for your system (ST/STe/TT/Falcon030), GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide. Call or write for more details.

Wordflair 2 £129

We are delighted to announce, at last, the immediate availability of the English variant of Wordflair 2, version 1.1. The main features of this exciting, and long-awaited, package are:

- Full support for FSM GDOS which is included with the product
- Much improved user interface
- English language spelling checker and thesaurus included, with up to 5 user dictionaries. Plus hyphenation
- Improved graphic handling including the ability to preserve the aspect ratio of the graphic, hide the graphic (for faster display) and find the graphic on disk
- Expanded and improved region setup with a easier choice of Calc/Graph/Write regions
- Enhancements to the database handling

including the ability to import tab- or comma-delimited ASCII files

Wordflair 2 is now in stock.

The package requires at least 1Mb memory or 4Mb if used with an Atari Laser printer.



The Serious Page

The HiSoft Promise

While many other companies are abandoning the Atari market, we are moving forward, acquiring and writing new titles, many of which are detailed on this page.

Rest assured that we will continue to offer you the best software at truly competitive prices with a range of customer support options to ensure that you can use your Atari 680x0 computer, and our software!, with confidence and ease.

We are very encouraged by the Falcon030, believing that it will breathe new life into the general-purpose microcomputer market, which has often been driven by the computer enthusiast, who will find this new machine both fascinating and exciting.

We will sticker all Falcon030 product with Atari-approved labels for convenience and clarity; there are three such labels - *Falcon030 Exclusive*, *Enhanced* and *Compatible*, watch out for them.

TruePaint £39.95



Due for release in November 1992, TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer. Some of the highlights of the product are:

- Works in all resolutions including 768x480 True Colour
- Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc.
- Zoom, full screen mode with edit, colour picker, bezier curves
- Animation, FSM/Speedo GDOS support, wide variety of file formats including IFF, TIFF, JPEG and more

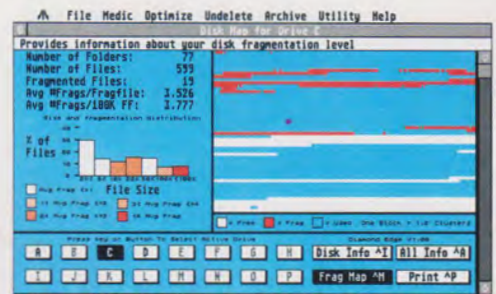
Watch out for more details of this exciting new package, or call us and we will send you a brochure when this is available.

HiSoft BASIC 2, Harlekin 2, Lattice C 5.5, HiSoft C, HighSpeed Pascal, FTL Modula-2, KnifeST, WERCS, HiSoft Devpac, Wordflair, Diamond Back, Superbase, Diamond Edge, K-Spread, K-Data, K-Word, FirST BASIC, HiSoft FORTH, ProFlight, Tempus 2 ...

All prices include UK VAT and P&P within the UK. Please call for export prices, educational discounts etc. E&OE. Specifications and prices may change.

Diamond Edge

£39.95



From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks.

XBoot 3 £34.95

We are pleased to have acquired the exclusive rights to version 3 of this package, which provides comprehensive management of your AUTO folders.

XBOOT is an efficient, easy-to-use program and comes with a well-written and useful manual.

Kuma Products

We have taken on the majority of Kuma Computers Ltd's products for the Atari and Amiga computers, while Kuma concentrate on their book titles.

We are re-compiling K-Spread 4 under Lattice C 5.5 and hope to end up with a faster, more compact product, which we will correct and enhance.

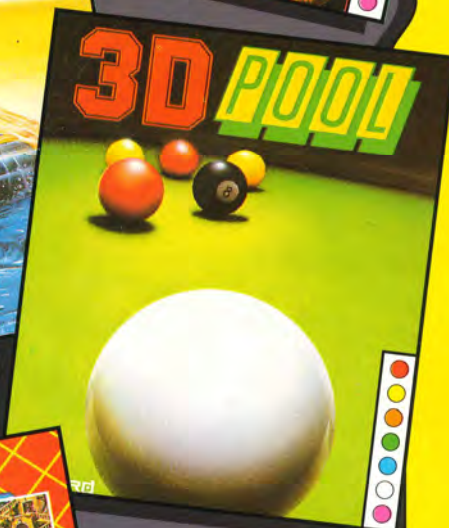
Superbase Professional £99.95

Following the sale of the ST and Amiga versions of Superbase to Oxxi Inc with whom we are working closely on a project for the Falcon030, we are pleased to be able to offer Superbase Professional (Version 3) at a substantial saving over its previous recommended price.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call Julia, Sallie or Marlynne on 0525 718181.

HiSoft
High Quality Software

The Old School, Greenfield,
Bedford MK45 5DE UK.
Tel: +44 (0) 525 718181
Fax: +44 (0) 525 713716



with over
100
 top games...
 are you
 playing
 them or
WHAT?



- CBM 64/128 Cass ● PC 5.25"
- AMSTRAD CPC Cass ● AMIGA
- SPECTRUM Cass ● PC 3.5"
- ATARI ST

SEND A S.A.E. FOR FREE CATALOGUE
 Kixx, Units 2/3, Holford Way, Holford, Birmingham B6 7AX. Telephone: 021 625 3311
 CREATURES © THALAMUS EUROPE LTD. ALL RIGHTS RESERVED. CARRIER COMMAND © REALTIME GAMES SOFTWARE. FLIMBO'S QUEST © SYSTEM THREE SOFTWARE LTD. ALL RIGHTS RESERVED. SUPER MONACO G.P. © 1990, 1991 SEGA. ALL RIGHTS RESERVED. 3D POOL AARDVAARK SOFTWARE. STARGLIDER 2 ARGONAUT SOFTWARE. ALL RIGHTS RESERVED. PANZA KICK BOXING © FUTURA 1991. ALL RIGHTS RESERVED.